MAR. 14, 1952

BUCKEYE STARTS FLORIDA CONSTRUCTION . . . Page 11

ARE YOU SELLING THIS INDUSTRY TO YOUTH? . . . . . Page 12

RECENT ACCOMPLISHMENTS IN THE PULPWOOD INDUSTRY . . . . . Page 22

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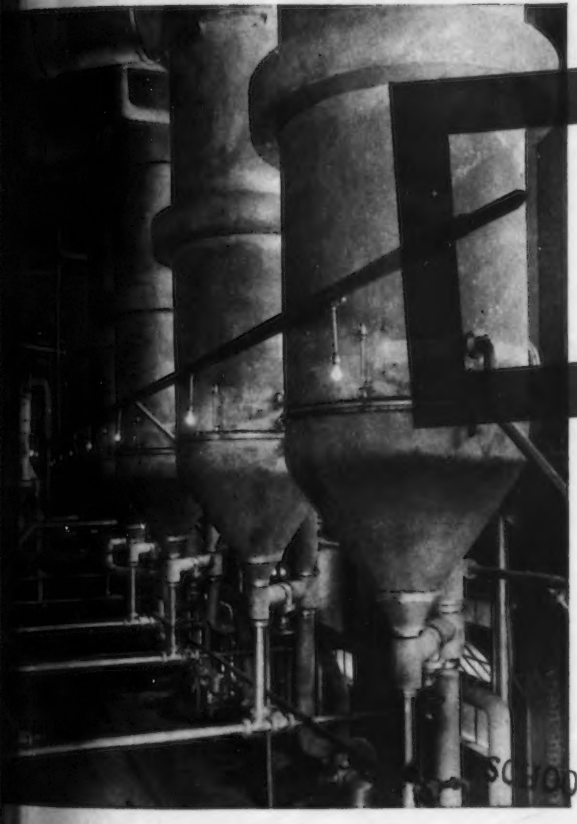
Paper TRADE JOURNAL



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WITH SWENSON L.T.V. EVAPORATORS Years of operation in kraft and soda pulp mills have demonstrated the economy of this equipment — low first cost, low operating cost, and low maintenance.

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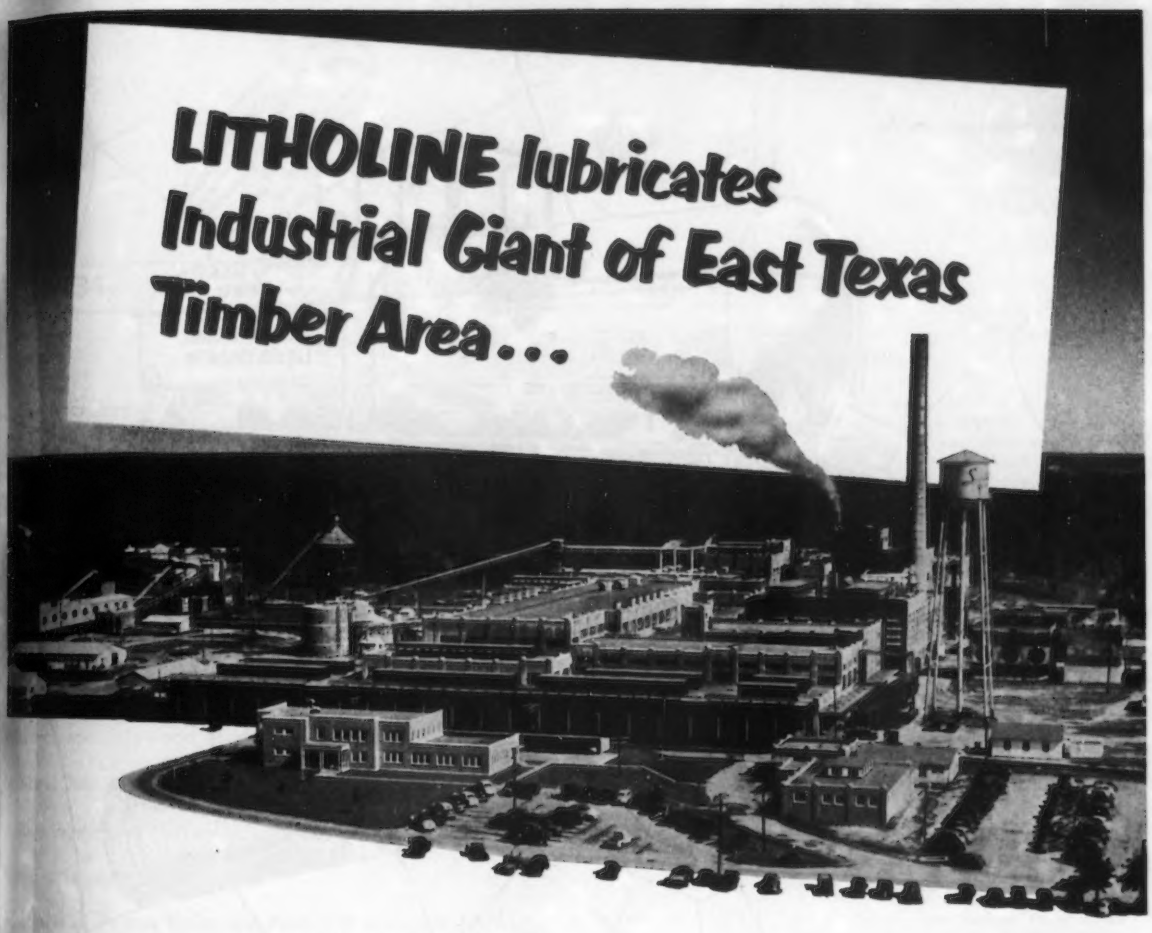

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To all our customers in the paper industry, we hardly need say that DIAMOND's policy is to supply all the chlorine we can, and help as much as we can during this period of shortage.

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ABC

Paper TRADE JOURNAL

ABP

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THIS WEEK

This issue inaugurates a new series on pulpwood production and forestry.

The first article in this series is one that received more publicity in the New York Papers than any other article presented during "Paper Week." In "Research and Pulpwood Production," Dr. Lincoln R. Thiesmeyer, President of the Pulp and Paper Research Institute of Canada, summarizes recent accomplishments and takes a peek into the future to provide some very interesting ideas.

REMEMBER THESE DATES

MARCH 16-18: American Institute of Chemical Engineers, Atlanta Biltmore Hotel, Atlanta, Ga.

MARCH 24-26: The National Paper Trade Assn., Annual Meeting, Waldorf-Astoria, New York, N. Y.

MAR. 26-28: Woodlands Section, Canadian Pulp and Paper Assn., Annual Meeting, Mount Royal Hotel, Montreal, Que., Canada.

MAR. 30-31: Packaging Machinery Manufacturers Institute, Semi-Annual Meeting, Hotel Dennis, Atlantic City, N. J.

MAY 5-8: Third Coating Conference of the Technical Assn., of the Pulp and Paper Industry, at the Sherman Hotel, Chicago, Ill.

MARCH 10-13: Canadian Pulp and Paper Assn., Industrial Relations Div., Annual Meeting, Montreal, Que., Canada.

APRIL 1-3: National Packaging Exposition, 21st Annual Conference on Packaging, Packing and Shipping, Public Auditorium, Atlantic City, N. J.

JUNE 17-19: American Pulp and Paper Mill Superintendents Assn., 33rd Annual Convention, Book-Cadillac Hotel, Detroit, Mich.

JUNE 18-20: Canadian Pulp and Paper Assn., Technical Section, Annual Meeting, Murray Bay, Que., Canada.

JUNE 19-21: Empire State Section of TAPPI and the Niagara Branch of Tech. Section, Canadian Pulp and Paper Assn., Joint Meeting, General Brock Hotel, Niagara Falls, Ont., Canada.

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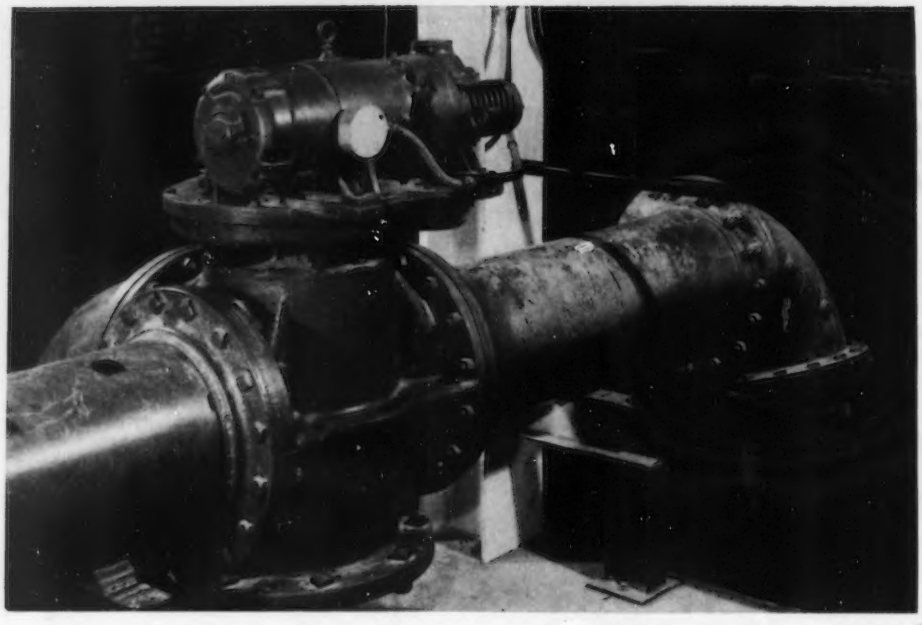

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Once you've installed electrified valves in your stock lines you're "blasting with atoms."

Shartle builds three types of valves for panel board operation—rotary—gates—slide.

The Shartle Hope type rotary features a top-suspended rotor that never sticks—cannot stick; valve shoulders free of pockets and areas in which stock might collect, dry and freeze the rotor. When you press a button or flip a switch you get action.

These valves are built in all required mill sizes—4" to 22"—and with body and rotor of all cast-iron, or of required corrosion-resistant alloys.

Shartle also builds electrified gate and slide valves.

Also hand wheel, lever, and chain operated rotaries, hand wheel, pneumatic, lever or crane-operated gates and slides, etc.

Get specification data sheets on Shartle valves and you'll see why they are so dependable.

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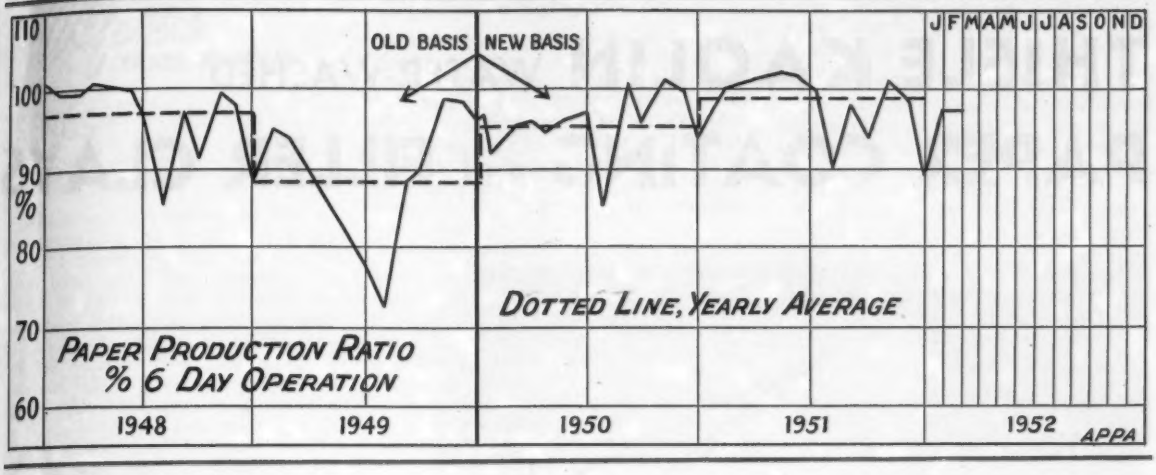
OUR BUSINESS



Brief of Important Figures

Source	Production	WEEK ENDING Mar. 1, '52	Feb. 2, '52	Mar. 3, '51
APPA	Paper Production Percent Capacity[3]	97.1	98.1	102.4
	Unbl. Kraft Paper Production Percent	92.0	91.3	98.4
NPA	Paperboard Operating Ratio Percent Inch Hours	83	85	105
		Jan. 1952	**Dec. 1951x**	**Jan. 1951**
APPA	Paper Production* (Except Newsprint and Building Papers) ....Tons	917,000	862,151	892,000
	New Orders ....Tons	963,000	820,265	936,360
	Unfilled Orders ....Tons	935,000	870,769	910,835
	Shipments ....Tons	899,000	863,959	885,000
		Jan. 1952	**Dec. 1951**	**Jan. 1951**
NPA	Paperboard Production ....Tons	903,461	757,914	1,176,679
	New Orders ....Tons	962,138	768,320	1,349,991
	Unfilled Orders ....Tons	405,520	358,720	761,828
	Our Customers Activities Index[1]	**Latest Mo.°**	**Previous Mo.°**	**Year Ago°**
FRS	Manufactures Total Index	226	229	227
	Durable Mfg. Index	278	277	266
	Nondurable Mfg. Index	185	190	196
	Chemical Products Index	303	303	288
	Mfg. Food Products Index	153	162	161
	Printing and Publishing Index	178	183	179
ODC	Magazine Advg.-Printer's Ink Index	357	347	319
	Retail Sales Combined Adjusted Index	387.6	384.2	374.7
	Drug Index	247.0	247.3	241.2
	General Merchandise Group Index	400.1	404.1	399.6
	Grocery and Combination Index	468.0	459.0	426.5
	Prices Index			
BLS	Consumers Price Index[1]	189.1	188.6	178.8
	Wholesale all Commodities[4]	113.5	113.6	112.1
	Wholesale Foods	187.3	188.8	179.0
	Commodities other than Farm Products and Foods[4]	114.6	114.5	114.1
	Wholesale Pulp and Paper[4]	118.4[4]	118.4	114.4
	Purchasing Power of Dollar, Consumers Prices[1]	52.9	53.0	55.9
	General Activity Index			
FRS	Mfg. Production-Worker Payroll	429.4	434.1	426.0
	Unemployment Compensation Initial Claims (M)	1,151	948	1,051
	Miscellaneous Carloadings-Thousands of Cars	1,747	1,524	1,814
	Electric Output (Million KW hr.)	38,459	37,313	35,821
PTJ	Average 32 P & P Common Stocks as of March 8	$36.12	$36.71	$38.48

[1] 1935-39 = 100 Unadjusted Index.
[3] New 6-7 day basis.
[4] New Index 1947-1949 = 100.
° For details see APPA Monthly Statistical Summary—January 1951 Estimated Figures.
° Latest Month Available on Request.
x Revised figures.

From vast reserves

THIELE KAOLIN WATER-WASHED PAPER COATING and FILLER CLAYS

Partial view of a Thiele Kaolin mine near Sandersville, Georgia

Millions of tons of high quality kaolin, possessing excellent color, fine particle size, and low viscosity are contained in this single deposit. Part of our extensive holdings in the heart of the Georgia clay belt.

Thiele Kaolin, through the variety of high quality kaolin clays in its enormous deposits and through its modern processing plant, is serving an ever increasing number of leading paper manufacturers.

Write for full information and sample of Thiele Kaolin clay for your particular use.

THIELE KAOLIN COMPANY

P. O. Box 270 **Sandersville, Ga.**

Paper TRADE JOURNAL

TRENDS

Office of the PAPER TRADE JOURNAL,
Wednesday, March 12, 1952.

A cross-sectional survey of fine paper demand in the local area proves beyond a doubt that business is good, much better than the normally slow months of January and February, and well above 1950's pre-Korean demand.

While the younger men in the trade find the market quiet and dull, and salesmen tell of having to scrape for orders, older men describe demand as steady-to-strong though mixed conditions and confused business outlook detract from market stability. Deplored is the irresponsible tendency of the business press to bear the market and thus panic the unthinking.

Prices Are Firm

Following the recent rises in coated and uncoated book, which mostly brought eastern mill prices to authorized OPS ceilings (CPR 106), prices are firm.

Mill prices on brush-coated book papers rose about $3 a hundred pounds, with a few exceptions, despite easy demand for these finishes. Machine coateds took a $6 increase, uncoateds and offset, $8 a hundred pounds, mill price.

The usual competitive market conditions of grade and quantity make for variations pricewise, so that a range in resale still exists, as reported on *Prices* page.

Market Conditions Are Mixed

A change noted during the last two months by fine paper houses is that consumers are not banking on a huge build-up from Defense spending. Industries which have been tooling for Defense armament now have adequate paper stocks and are not expecting a new surge of buying for regular forms and writing papers. Engineering papers, however, are in steady demand, with an upturn noted for blueprint papers.

Large Printers Buying Steadily

Supporting the reported rise in national advertising expenditures, which showed a 4 percent gain over December and a 15 percent increase over January, 1951, according to *Printers' Ink* index, larger printers and lithographers are buying steadily of coated and uncoated books and offset. Small printers are quiet and are scraping for business.

Distributors who specialize in book stock describe demand as active where salesmen are selling hard. They tell, however, of a change in their stock position. All speak of getting their allotments much faster, though here again conditions are mixed.

Some houses spoke of having a good stock of all grades, of mill shipments actually rolling in, allotments coming two and more months at a time. Others have much less than they want of brand items of bonds as well as book.

One wholesaler told of being unable to get all he wanted of a No. 1 sulfite bond, while another mentioned the same brand as one he could buy to supplement his short supply of another grade.

Generally, agreed, however, among all houses that sulfites are becoming freer, but that they are still several months behind demand on highest quality name brands of No. 1 sulfite bonds, mimeo and duplicator stocks, and quality offset. Some spoke of sulfite ledgers being acutely short, of easier supply in 25 percent rag, all other rag contents being readily available. Brush coateds are easy, No. 4 bond is available.

Most mills are still on allocations and their customers are trying to take monthly quotas in order to retain their positions should the market take a sudden upturn. Allocations, however, are flexible, and the mills are catching up on backlogs of many of the tightest items.

Printers also have sizable stocks but are buying steadily to keep inventories of regular items. Some dealers noted a rise in small orders for rush delivery, indicating to them that at least some printers had less than necessary stock and that business is on the upturn.

Shopping for quality, price and delivery was everywhere reported, also consumer resistance to sub-quality items which were marketed some months ago.

No Evidence of Price Slashing

No evidence could be uncovered anywhere of price cutting, save in the suggestion that differentials on volume tonnage of publications papers might again become the rule.

Offerings of mongrel items which dealers want to move out of stock might be talked of as price-cutting. They are, however, not a deviation from the firm market that currently exists, particularly for sulfites, quality offset, mimeo and duplicator papers.

Comparative Production and Backlogs

A study of comparative production and order backlogs offered in *Table 1* shows estimated paper output for January, 1952, 5.2 percent ahead of January a year ago by volume, with two more working days than the 1951 month. Comparative daily average for the month, however, lagged in all but coarse papers. Compared with December, 1951, the daily average was easier for the entire group.

Because of the drop in production of building paper, building board, and paperboard, total industry output was 13.8 percent below January, 1951, despite the two extra working days.

NPA Reviews Pulp Controls

Some revision of M-72 pulp controls could result from NPA sessions with producer and consumer groups in Washington today. In view of market weakness for unbleached grades, delimiting of usage, inventory and export on these grades is not unlikely.

—E.P.N.

Paperboard Production (Tons)*

	Mar. 1 1952	Feb. 23 1952	Mar. 3 1951	Month of February
Production	199,579	211,365	245,830	832,695
New Orders	200,560	173,186	345,004	783,773
Unfilled Orders	355,197	355,934	758,562	355,197
% of Activity	83	87	105	86

* Source: National Paperboard Assn.

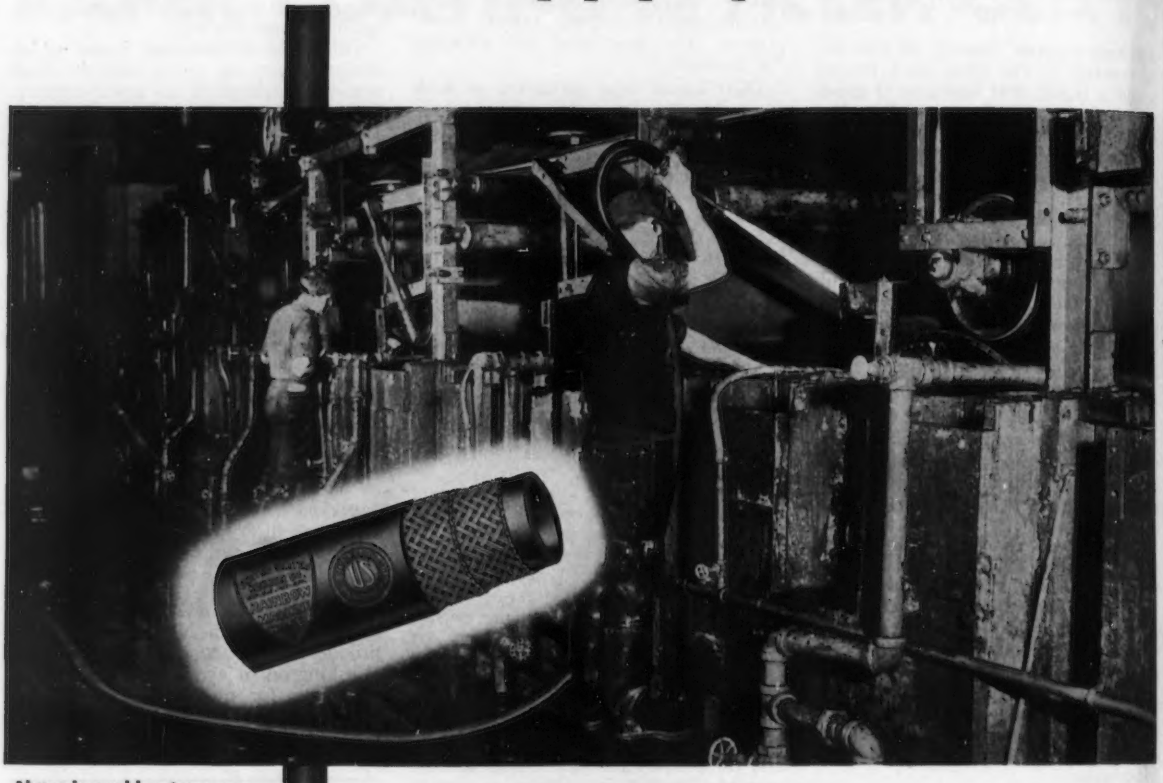
TABLE I

January Paper Production

	Production Tons	% Changes in Daily Avg. Production: January 1952 Compared with December 1951	% Changes in Daily Avg. Production: January 1952 Compared with January 1951	Orders Unshipped or Unmade (Tons): January 1952 Compared with December 1951	Orders Unshipped or Unmade (Tons): January 1952 Compared with January 1951
A. Printing Papers	316,000	— .3	— 2.2	+39,239	+50,470
B. Fine Papers	118,000	— 7.2	— 1.3	+ 6,297	—10,105
C. Coarse Papers	328,000	— .4	+ 3.6	+11,921	— 830
D. Tissue Papers	112,000	— 1.4	—19.1	n.a.	n.a.
E. Miscellaneous Papers	43,000	— 5.1	— 1.2	— 1,632	—23,890
F. Total, Groups A-E	917,000	— 1.5	— 2.6	+64,231	+ 7,645
Total Products: Paper, Newsprint, Building Paper, Paperboard, and Building Board	1,942,000	1,847,520* Dec. 1951	2,246,161 Jan. 1951	n.a.	n.a.

Source: APPA. n.a.—Not available. * Revised.
January 1952 had 27 days as against 25 days for January and December 1951.

What's U. S. Rubber doing to help paper production?



Above is a cold water paper machine hose made by "U.S." for washing down paper-making machines, screens and floors. Its wall structure is light and flexible, yet sufficiently rigid to prevent kinking and collapse at the supply connection.

Custom made roll covering by "U.S." When your rolls need recovering, let U.S. Rubber engineers analyze operating conditions in your mill and check operating speeds, working pressures, and types of stock.

New rubber pinch valve (left) outwears metal when carrying abrasive or corrosive mixtures. It can be used in "cracked" position to control flow of paper pulp in paper processing. Its flexibility offsets misalignment in pipes, absorbs vibration, breaks up galvanic action. Compactly designed, requires remarkably little maintenance.

Shown here are just a few of the dozens of United States Rubber Company products that enable paper mills to turn out more work at less cost. "U.S." technicians are constantly studying *new* ways to make paper production more efficient. They like the challenge of unusual assignments. It will pay you to make use of the "U.S." advice and experience. Write to address below.

PRODUCT OF

U.S. RUBBER
SERVING THROUGH SCIENCE

UNITED STATES RUBBER COMPANY

MECHANICAL GOODS DIVISION, ROCKEFELLER CENTER, NEW YORK 20, N. Y.

News of the Week

Paper TRADE JOURNAL

St. Croix Expansion

Vice-president and general manager Hayes of St. Croix Paper has outlined a program for expansion which will start with a new boiler at a cost of about three-quarters of a million dollars. The building will be started with the warm weather. The boiler is now being fabricated. The several hundreds tons of steel needed for erection have been promised for spring delivery and the job should be completed by the end of this year. The new garage to be erected at the end of the machine shop will fill a long-felt need. The steel building 60′ x 120′ is on the ground and the erection should start as soon as the frost is out of the ground. The foundation for the 550,000-gallon groundwood stock tank has been poured and is ready for the steel. This will be a welded tank and the plates have been promised for May or as soon as it is warm enough to weld in the open. The foundation for the new grinder building is covered and waiting for warm weather. All of the material for this building is on the job. In addition to this, equipment will be installed on the paper machines which is expected to give some increased production. The company produced more paper last year than ever before in its history.

International Funds For Mexican Mills

Initial credits amounting to $696,000 have been released by the International Bank for Reconstruction and Development to aid the sorely-pressed Mexican paper industry. Now paper manufacturers will be able to arrange loan credits with the group of eight Mexican banks which jointly manage $10 million of World Bank funds.

The money now available is being invested in machinery purchased in the United States, for the manufacture and treatment of paper and allied products. Industry leaders have expressed formal thanks to the Government for its aid in obtaining funds which will materially aid in the further development of the Mexican paper trade.

Meanwhile, the brief flurry of newsprint shortages during the month of January, when Mexican papers had to curtail number of pages, especially in the Sunday editions, seems to be over as newsprint shipments arrive steadily in the port of Veracruz. In recent weeks, shipments reported at the port have ranged from 2,000 tons to 4,000 tons.

The Government has officially stated that for the moment, and until Canadian newsprint mills begin regular shipments of paper quotas alloted to Mexico according to recent agreements, there will be no danger of further shortages. This reassurance was particularly aimed at newspaper owners who had been making provisions for newspaperless days if short supplies continued.

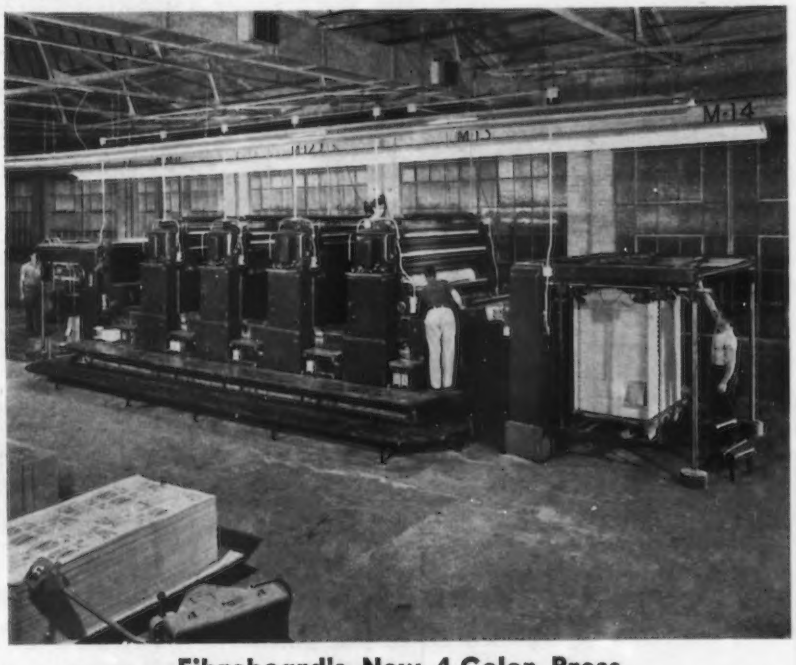
The government explained that recent shortages were not the result of any fault on its part, but due to delays in shipments from mills that have paper supply contracts with Mexico. It admitted that reserves had almost been depleted, but that a reserve store is once again being built up.

Dixie Expands at Brampton

Dixie Cup Co., Brampton, Ont., has the walls and roof up and interior work is beginning in the expansion project at the plant. The present plant which was completed in 1948 at a cost of $350,000 covers 60,000 square feet of office, production and warehouse space. The new addition will cover 33,600 square feet and provide more production and warehouse space.

Buckeye Starts Construction of Florida Pulp Mill

FOLEY, Fla.—The Buckeye Cellulose Corp., subsidiary of the Procter & Gamble Co., Cincinnati, has started work on the construction of a $20 million cellulose pulp plant adjacent to the former offices of the Brooks-Scanlon Co., whose 445,000-acre timber properties in northwest Florida were recently purchased by the Buckeye company. The new plant will use a pre-hydrolized sulphate process for extracting pulp from pine and is expected to produce about 100,000 tons a year of nitrating and dissolving pulp. Completion of the new plant, which will cover about 30 acres and employ 500 men, is scheduled for the fall of 1953.



Fibreboard's New 4-Color Press

New buildings having been completed, Fibreboard Products Inc. has recently installed two giant Rotary Miehle presses—one at their Vernon (Los Angeles) plant and the other at their Stockton plant. Designed especially for high-fidelity reproduction on carton board, these presses are among the largest in the United States, built for simultaneous color-printing of packages and cartons. The three-color press at Vernon and the four-color one at Stockton are capable of printing carton board sheets as large as 52" x 76" . . . The printing capacity was increased approximately 20% in both plants when these huge presses went into operation.

Good Neighbors

In this day of community relations, public relations, industrial relations, or whatever words you want to use for being a good neighbor, many programs have been worked out. Some are very fancy and expensive, others simple and directly from the heart. In the last analysis, all of the programs must be based on the "Golden Rule."

One phase, however, demands some extra attention. It might be called public education. This is not the 3 R's of formal education but a program to tell and show your neighbors what your plant makes, how it makes it, and what it means in terms of jobs, income and the contribution of other values to the community.

As we travel around the country we always ask: How well do people know your company? What do you do to sell your young people on the fact that the home town is a pretty good place to live and work, provided of course that it is. How do you combat, "The grass is always greener on the other side of the fence," and "The future always seems rosier away from home."

It's a problem, and a serious one especially within the paper industry in its small communities. Here and there we find determined efforts to bring the young people into focus on their place in the "old home town," in its business life and community affairs.

One such place is York, Pa. All business has joined hands to show the college and high school students that there is a place for them at home, and that they are wanted and needed there.

Another place came to our attention this past week: Beloit, Wis., through the efforts of the Beloit Iron Works. What happened out there? It sounds simple, but it took time, careful preparation, and a large measure of devotion to the American system.

Working on the belief that "American Freedoms" cannot be taken for granted, that they are not rights but privileges, to be earned only by work, Beloit developed its program with the Beloit High School.

The instructor in National Affairs arranged for 60 seniors to visit Beloit Iron Works. (The idea of an "Instructor in National Affairs" certainly rings a bell. This sounds more challenging than "Current Events" or "Social Studies." How many high schools have such an instructor?)

T. G. Chekouras of Beloit worked out the program with three objectives: (1) to sell the American system of free enterprise; (2) to introduce the students to Beloit Iron Works and; (3) to give the students some conception of paper-making and the essential part it plays in our way of life.

So that you may be guided in carrying out your own plans, we are pleased to give you Beloit's program:

Let's Get Acquainted!

"You, the young citizens of Beloit will, one day soon, assume a position

Presenting motion picture to Beloit High School. L. to R.: Paul Nee, Instructor in National Affairs; Robert Cary, President of Senior Class; T. G. Chekouras, (Beloit Iron Works).

A.P.A.W.

ONLIWON

INDUSTRIAL
TOWELS
TISSUE

JANUARY NEWSPRINT REPORT

NEWSPRINT ASSOCIATION OF CANADA, MONTREAL

I. PRODUCTION AND SHIPMENTS in short tons: 2,000 pounds		JANUARY 1952	JANUARY 1951	JANUARY Percent Change	YEAR TO DATE 1952	YEAR TO DATE 1951	YEAR TO DATE Percent Change
1. Canadian Production:	mo. and year to date	470,456	453,019	+ 3.8	470,456	453,019	+ 3.8
	per working day	18,094	17,491	+ 3.4	18,094	17,491	+ 3.4
	percent of capacity	101.5	100.5		101.5	100.5	
2. Canadian Shipments:	to United States	377,970	376,412	+ .4	377,970	376,412	+ .4
	to Can. Consumers	28,803	28,438	+ 1.3	28,803	28,438	+ 1.3
	to Other Markets	38,439	18,493	+107.9	38,439	18,493	+107.9
	total: all markets	445,212	423,343	+ 5.2	445,212	423,343	+ 5.2
3. U. S. Production:	mo. and year to date	97,216	92,959	+ 4.6	97,216	92,959	+ 4.6
4. U. S. Shipments:	to U. S. Consumers	90,471	92,487	— 2.2	90,471	92,487	— 2.2
	to Other Markets	4,575	772	+492.6	4,575	772	+492.6
	total: all markets	95,046	93,259	+ 1.9	95,046	93,259	+ 1.9
5. U. S. Imports from Europe:		* 10,500	19,512	— 46.2	10,500	19,512	— 46.2

*estimate; see Table 8

II. CONSUMPTION AND STOCKS in short tons: 2,000 pounds		JANUARY 1952	JANUARY 1951	JANUARY Percent Change	YEAR TO DATE 1952	YEAR TO DATE 1951	YEAR TO DATE Percent Change
6. U. S. Consumption:	estimated total	460,420	457,685	+ .6	460,420	457,685	+ .6
7. North American Stocks:	U. S. Consumers	733,551	623,201	+ 17.7	733,551	623,201	+ 17.7
	Canadian Mills	127,154	118,818	+ 7.0	127,154	118,818	+ 7.0
	U. S. Mills	9,738	7,941	+ 22.6	9,738	7,941	+ 22.6
	estimated total	870,443	749,960	+ 16.1	870,443	749,960	+ 16.1
8. A.N.P.A. Report: 525 Newspapers	Consumption	345,315	345,552	— .1	345,315	345,552	— .1
	Stocks (tons)	549,869	440,124	+ 24.9	549,869	440,124	+ 24.9
	Stocks (days)	49	39		49	39	

The Most "Advanced" ASBESTOS FELT

Brandon

"Scapa-Hall"

No. 46 AA Heavy Duty 4 ply
No. 54 AA Medium 3 ply

Special Features:

1 High percentage of asbestos
2 Part of back is asbestos
3 Oversize cotton warp for strength
4 Designed and engineered to give high porosity and absorbency
5 Completely pre-stretched and pre-shrunk
6 Equipped with "Clipper Seam" if desired
7 Widths 100" to 280"
8 Proven performance and economy

Morey Paper Mill Supply Co.

309 SOUTH ST., FITCHBURG, MASSACHUSETTS

Sole Distributors of Dryer Felts Manufactured by

The Abney Mills, **BRANDON** Dryer Felt Mill

GREENVILLE. SOUTH CAROLINA

in the social structure of Beloit. Many of you will become community leaders; others of you as heads of families will become an inspiration to young people who will follow you.

A community such as Beloit is made up of basic units which are your individual homes. These units are bound together by a common desire to provide for themselves. Industries such as Beloit Iron Works serve that purpose in the community.

In order that any home unit can reach its fulfillment, it is necessary that the business of earning a living be augmented with opportunities to gain an education in good schools; to worship in churches of their faith; and to enjoy the protection of a well-governed city, state and nation.

As one of the phases of community life, we want you to know us; and, of course, we certainly want to know you. We feel that Beloit meets the requirements of a good city. As future policy-makers in the community we feel that you want to know what makes the various phases of community life tick.

We want you to know Beloit Iron Works and the community it serves, so that you will feel, as we do, that Beloit is a good place in which to plan a future."

Beloit Iron Works Student Day Program

Welcome and Introduction to Program—Mr. Roy Mielke.

"Our American Business System"—Tom Chekouras. Visual economic program employing the flannel board and floktite backed indicators.

Tour of Offices; Purchasing, Cost, Estimating, Sales, Research, Tabulating, Production — Tour Guides — Group Leaders (Engineering Dept.)

"Accomplishments of Our Systems"—T. Chekouras.

History of Beloit Iron Works, "Highlights of Former Years"—Presentation of the movie "The Paper Story."

Lunch—Aldrich House.

Afternoon Session

"The Importance of Competition"—T. Chekouras, Aldrich House.

Tour of Beloit Iron Works Manufacturing Area. Tour Guides — Shop Supervision—N. Lovaas, L. Dalvit, R. Riendl, E. Werner, C. Meili, L. White.

"Individual Freedoms Under Our System"—T. Chekouras.

"Weighing the Pros and Cons"—Student Discussion.

Safety First!—During the time you are touring the plant you will be requested to wear safety glasses. Beloit Iron Works has a good record on eye accidents. Help us to maintain it.

You can do it too! In fact, we feel so strongly about it, we say you must do it. We have reached the point where the paper industry cannot ignore the efforts of its competitors to enlist young men and women for the communications, chemical, steel, rubber, and petroleum industries.

U. S. IMPORTS OF WOODPULP

Preliminary, January, 1952

Item	Country of Origin	Short Tons
Mechanical		
Unblchd.	Canada	15,547
	Finland	389
		15,936
Screenings	Canada	397
Blchd.	Canada	1,956
Chemical		
Sulfite, Unblchd.	Canada	35,691
	Sweden	3,581
	Western Germany	169
	Finland	8,313
		47,754
Screenings	Canada	566
Sulfite, Blchd. Rayon & Special Chem. Grades	Canada	20,292
	Sweden	118
		20,410
Other	Canada	19,035
	Sweden	750
	Norway	873
	Finland	990
		21,648
Sulfate, Unblchd.	Canada	12,759
	Sweden	4,472
	Finland	4,627
		21,858
Sulfate, Blchd.	Canada	37,292
	Sweden	6,268
		43,560
Soda Pulp, Blchd. & Unblchd.	Canada	2,273
Totals, January	Canada	145,808
	Finland	14,319
	Sweden	15,189
	Western Germany	169
	Norway	873
		176,358

We have had a late start. We have to hurry to catch up. We have a fine industry, a good place to work, many advantages, *we have something to sell, now let's sell it.*

Henry J. Percy

Clearing for Groundwood And Sulphite Plant

The proposed site for the Point Edward, Ontario, groundwood and sulphite mill is being cleared. This will be the start of a multi-million-dollar joint Canadian-U.S. project. There are only two such operations in the world — one between New Brunswick and Maine and the other in Britain.

According to the plans announced over a year ago, a $7 million plant will be erected at Point Edward and the groundwood and sulphite processed there will be pumped in slush form across to Port Huron where a $9 million mill will be constructed to convert the material into catalogue and directory paper.

Sorg Gives Employees Bonus of Common Stock

Sorg Paper Co., Middletown, Ohio, will parcel out shares of the common stock of the company to all employes as part of an anniversary bonus.

The company, which is observing its 100th anniversary, will distribute approximately 3,000 shares of common stock, with a market value of approximately $60,000, and $12,000 in cash.

More Power for Quebec Mills

OTTAWA—With the new installation to provide reserve power for the Baie Comeau newsprint mill of its parent company, Quebec North Shore Paper Co., the Manicouagan Power Co. is making considerable progress on a new $15 million hydro-electric development near the mouth of the Manicougan River, approximately 425 miles from Montreal.

The plans include an initial 45,000 hp. generator, with a second unit of the same size to be installed later. The project should be completed in 1953.

MacLaren Quebec Power Co., a subsidiary of MacLaren Power and Paper Co., is reported to be planning future construction of a new 45,000 hp. plant on the Lievre River at Buckingham, Que.

Cupples Buys Smith Envelope

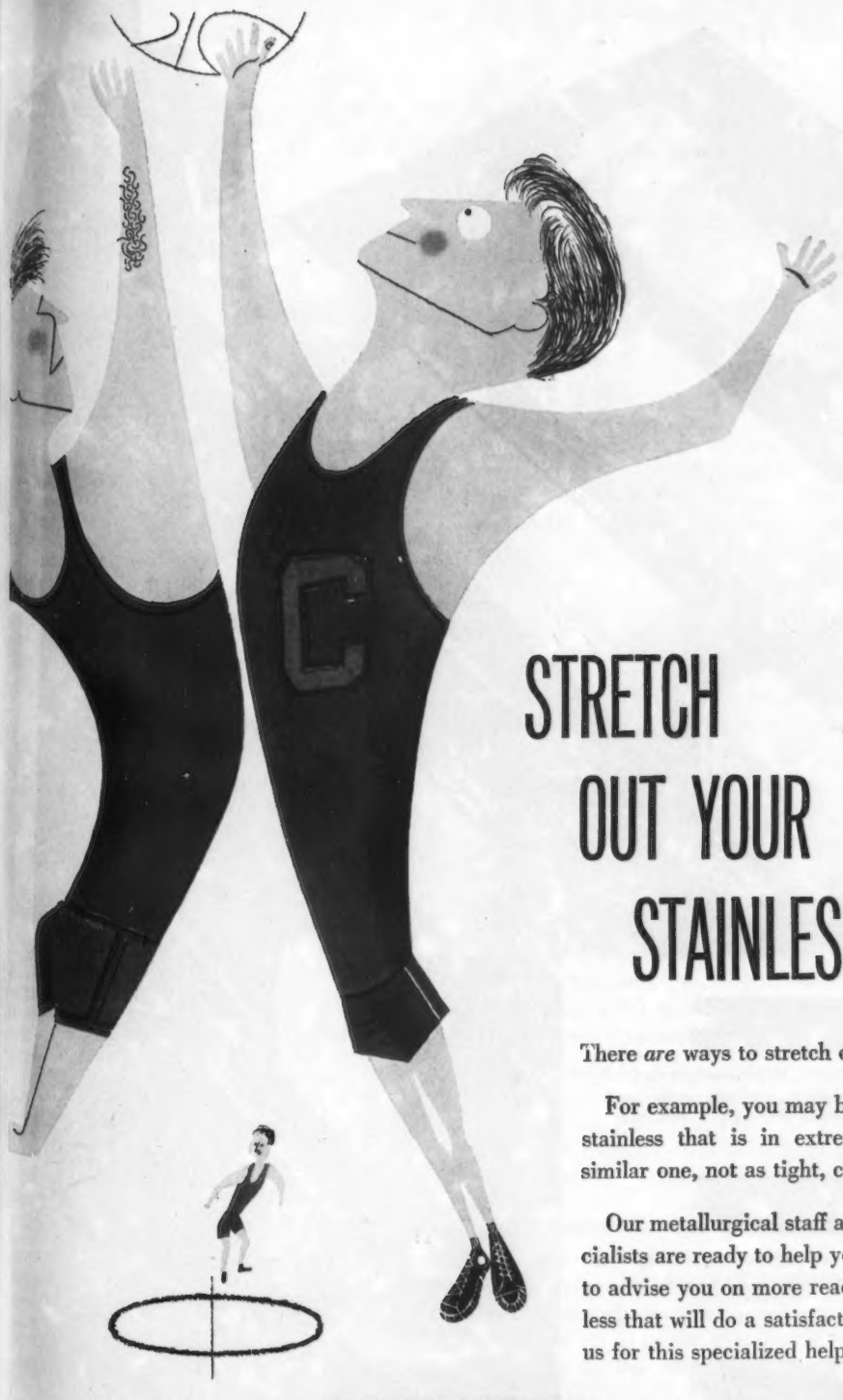
Cupples-Hesse Corp., St. Louis, has recently purchased Smith Envelopes, Inc., of Detroit, Mich. This recent acquisition is the third plant for the St. Louis firm: a factory in St. Louis, Cupples-Hesse Corp. of Iowa at Des Moines, and the new Detroit addition, which will be known as Great Lakes Div., Cupples-Hesse Corp.

Mr. Frank Tullar, formerly president of Smith Envelopes, Inc., will direct the activities of the firm under new ownership, as vice-president and general manager. In addition to Mr. Tullar, Officers of the Great Lakes Division are: S. Cupples Scudder, president and treasurer; N. L. Harms, executive vice-president; H. Kurt Vahle, secretary.

Under the ownership of Cupples-Hesse Corp., sales functions of the Detroit Division will cover all products manufactured by the parent firm. Immediate expansion in the production of cups, tags, bags and food containers, as well as envelopes, is planned. No equipment or personnel will be moved from St. Louis. The acquisition of the Detroit plant is an expansion move, and not one of decentralization.

Eastern's Greatest Production Year

Eastern Corp. during 1951 enjoyed the greatest productive year in its history by producing 77,631 tons of sulphite pulp and 52,603 tons of fine business papers. This is an all-time record in Eastern's 62 years of manufacturing high-grade pulp and fine business papers.



STRETCH OUT YOUR STAINLESS, TOO

There *are* ways to stretch out your supply of stainless.

For example, you may be using a grade or finish of stainless that is in extreme demand when another similar one, not as tight, could do the job adequately.

Our metallurgical staff and stainless fabricating specialists are ready to help you look into this matter and to advise you on more readily-available types of stainless that will do a satisfactory job. Feel free to call on us for this specialized help.

CRUCIBLE first name in special purpose steels

52 years of Fine steelmaking

STAINLESS STEEL

CRUCIBLE STEEL COMPANY OF AMERICA, GENERAL SALES OFFICES, OLIVER BUILDING, PITTSBURGH, PA.

REZISTAL STAINLESS • REX HIGH SPEED • TOOL • ALLOY • MACHINERY • SPECIAL PURPOSE STEELS

St. Regis Paper Co. saw the advantages to be gained in terms of reducing voltage problems and cutting power costs through a planned electrical system.

They called in Westinghouse early in their plans to get the benefit of Westinghouse experience with similar installations.

Do what hundreds of other paper firms are doing. Have Westinghouse work with your engineers in the application of the best electrical system for your plant.

Whether it's a modern electrical system like this, a new drive, better servicing or simply the application of a piece of electrical equipment to a tough job—Westinghouse has the answer.

St. Regis Paper Company's moneysaving new power system. Good planning, with help from Westinghouse, resulted in a highly efficient installation.

The Right Move Now

can save you money for 20 years

If you're going to build, expand or modernize a paper mill, plan your Power System *early* in the plant design stage. When Alabama Pulp and Paper Company, now a part of St. Regis Paper Company, built a new mill at Pensacola, Florida, they called in Westinghouse early to help plan the system. They're getting benefits that will keep paying off for the life of the mill—and these same benefits can save for you.

No voltage problems—There's no low-voltage trouble to slow production in this new mill. Machines throughout the plant get full voltage from Power Centers located *throughout* the mill. The Power Centers are served by high-voltage feeders from the main generators. There are no long low-voltage lines to cause voltage drop.

Saves power costs—This whole system was planned on an over-all basis and the effect of the motors and other equipment on the power factor was considered. Thus it was possible to arrange the system to maintain a high load power factor. This saves power generating dollars. More savings come from the short low-voltage feeders because power isn't wasted in transmission losses.

Minimum shutdowns—With Power Centers located throughout the mill, the chances of a plant-wide stoppage are greatly reduced. Also, the major circuit breakers are designed so as not to trip on harmless temporary overloads. When a fault does occur, it's cleared fast and service can be speedily restored.

Low installation costs—The major equipment in this system consists of the High-Voltage Switchgear, Power Centers and Motor Control Centers. Westinghouse supplies each as a factory-assembled unit—pre-wired and pre-tested. In this mill, as in any other, this means big savings in installation, wiring and maintenance costs.

Call Westinghouse for System Planning Help

You can make these important savings when *you* build, expand, or modernize. Just call your Westinghouse office early—so that the power system can be planned along with the rest of the mill. You'll make major savings as long as the plant is in operation. Westinghouse Electric Corporation, Box 868, Pittsburgh 30, Penna. J-94877

YOU CAN BE SURE IF IT'S Westinghouse

EQUIPMENT FOR PAPER PRODUCTION

WESTINGHOUSE

GOVERNMENT GOSPEL

Ease Wood Pulp Export Control

WASHINGTON, D. C. — Easing of home demand for some grades of woodpulp this week induced NPA to set first-quarter export quotas, and remove quantitative restrictions on exports of unbleached sulfate wood pulp.

An increase of 3,000 tons was ordered in the first-quarter export quota for dissolving and special chemical grades of wood pulp, to a total of 10,000 short tons, the same as for the final quarter of 1951.

An additional 2,000 short tons of unbleached sulfite wood pulp also was authorized for export in the first quarter, making a total of 9,000 short tons authorized for this grade of woodpulp and the paper grades of bleached sulfate and sulfite wood pulps. This compares with a total of 7,000 tons in the fourth quarter, 1951.

Unbleached sulfate wood pulp was previously under a 50,000 ton quota, but is now under "open-end" licensing, which retains export controls but sets no formal quantitative limit.

Wholesale Trade Increases

WASHINGTON, D.C.—January wholesale business of paper and related products rose 14 percent in January over December, the Bureau of Census reported this week.

Sales for the month were 13 percent under those in January 1951. Inventories were up 20 percent from a year before, and for January, 1952, three percent higher than in December.

New England States wholesalers reported January sales up 5 percent from December, but 10 percent under those a year earlier; Middle Atlantic States, January sales up 34 percent from December, down 9 percent from January 1951; East North Central States, January sales gains of 16 percent over December matched by a drop of 16 percent from January, 1951 level; others:

South Atlantic — January, up 16 percent from December, down 14 percent from January the previous year; Pacific States, 27 percent drop in January from December, 12 percent from January, 1951.

Chlorine Supply

Chlorine capacity on January 1, 1952, was 2,670,000 tons, compared with the 1951 output of 2,513,000 tons, NPA reported at a meeting with industry members during the week. Industry spokesmen urged retention of a current provision which requires producers to devote not over 10 percent of marketable production per month to filling defense-rated orders.

Chlorine freight car construction is at a satisfactory rate of progress, it was reported. By July, 1952, some 480 new cars are expected to have been delivered.

Canadian Pulp Production Up

OTTAWA — Production of all grades of pulp except unbleached kraft increased in January this year over the same month last year, according to the Canadian Pulp and Paper Assn. Total output was 770,112 tons against 738,211 tons in January, 1951. Unbleached kraft output declined to 51,386 tons from 56,945 tons.

Copper, Lead and Zinc Reports

WASHINGTON, D. C. — Monthly as well as quarterly allocation of zinc is authorized in a revision of M-9, the NPA Zinc order, announced this week. The order is of primary benefit to exporters.

The amended order incorporates without change the controls in the other zinc orders.

* * *

The copper-lead-zinc committee of International Materials Conference reported during the week that copper supplies are still inadequate, but that availability of zinc apepars to be improving. The committee expects to allocate some 20,000 tons more than in the first quarter of the year. If supplies continue to improve, said the committee, it will consider whether to cancel provisional allocations for the second half of 1952.

* * *

Second quarter export quotas have been set for copper, refined copper, brass and bronze scrap, as well as copper base alloy ingots, in addition to recently announced second-quarter export quotas for other shapes and forms of these metals. Each of the newly-established quotas is for the same amount as in the preceding quarter.

Consider Repeal of Steel Strapping Order

NPA last week agreed to consider an industry recommendation for immediate revocation of the steel strapping order, although the agency said it favors retention of the order so that strapping could be placed under allocation if a strike impedes supplies.

Increased Supplies of Aluminum and Copper

WASHINGTON, D. C.—Supplementary allotments of aluminum and various forms of copper were made possible for various claimant agencies by Defense Production Administration in releasing extra amounts of these metals for the purpose.

The agency said approximately 30 million pounds of aluminum and from 20 million to 25 million pounds of various copper products would be made available for redistribution.

A meeting is to be held this week to decide how the extra supplies will be divided, and an announcement is expected next week.

Canadian Pulpwood Exports

OTTAWA—Canadian Government reports exports of pulpwood advanced to $5,756,000 during January this year as compared with $3,783,000 a year ago and exports of newsprint paper increased to $47,242,000 in this period as against $40,725,000 last year, with shipments out of country of other paper rising to $3,478,000 in this month compared with only $2,810,000 last year.

Propose Revision of Walsh-Healey Act

WASHINGTON, D. C.—A general revision of regulations issued under the Walsh-Healey Public Contracts Act has been proposed by the Secretary of Labor.

The Act applies on Government supply contracts in excess of $10,000, and requires maintenance of Federal minimum wage, overtime pay, child labor, and other laws, in carrying out such contracts.

The major feature of the proposed revision puts more emphasis on responsibility of primary and secondary contractors, to clarify their relations to the Act.

Temporary exceptions to the Act applying to award of contracts to defense production pools are not involved in the proposed changes. The department will receive written observations from interested parties for 30 days from March 8.

Canada May Increase Newsprint Rate

OTTAWA — As a result of higher freight rates, pulpwood costs, and anticipated wage boosts, newsprint prices may go up again in Canada. Though so far no amounts have been mentioned, the general belief is that such newsprint prices may rise almost $10 a ton or a little less.

Wage agreements are known to be pending in the industry and strong hints are heard that the higher prices will depend on the kind of wage increases granted.

This belief of rising newsprint prices started when the Canadian dollar started to move up to par with the United States dollar and cut in heavily in the revenues of Canadian newsprint manufacturers. But at the same time it is learned that when the boosts are announced, they will reflect higher costs of production and transportation as much as loss of revenue from this exchange development.

Sufficient Supply of Food Cartons

WASHINGTON, D. C.—Production of special food cartons and paper pails will be equal to all 1952 demands, manufacturers reported to NPA this week.

Present supplies of raw materials are equal to demand, with indications that this position will be maintained during the year, it was reported. Spokesmen recommended removal of their products from inventory limitations of NPA Regulation 1, accordingly.

CHECK AND DOUBLE CHECK To assure smooth production schedules, essential material must be on hand at the right time. Above, Vice-President Bill Goodwillie (*center*) and Sales Correspondent Keith Looker (*left*) follow the progress of a major "rebuild," with Russ Olson, Chief of the Service Department. Meticulous follow-through helps build high-speed, high-production Beloit paper machines.—*Beloit Iron Works, Beloit, Wis.*

BELOIT

PAPER MACHINERY

WHEN YOU BUY BELOIT... YOU BUY MORE THAN A MACHINE!

Typical wool showroom, where buyers make their selections.

Photographs courtesy of Wool Bureau, Inc.

Out Where Huyck Felts Begin

First, the fleece. From 1,500 classified types, buyers choose only those special wools that meet the exacting requirements of Huyck Felts. In the principal wool-growing countries of the world this discriminating selection goes on. For these must be just certain wools, rare and costly.

In they come, to the great wool warehouses at Rensselaer, New York. From this vast supply, skilled sorters select the grades specified for each type of felt, then blend them for the precise task the felt is to perform on the paper machine.

This is the first, and only the first step in making the famous Huyck felts which for 82 years have rendered such essential service to the pulp and paper industry.

KENWOOD TEXTILE PRODUCTS

HUYCK *Felts*

F. C. Huyck & Sons — *Kenwood Mills* — Rensselaer, N. Y.

OPS Questions Titanium Dioxide Sales

The American Monomer Corp., Leominster, Mass., is named as defendant in injunctive and treble damage actions filed in the U. S. District Court in Boston, Mass., by the Department of Justice for the Office of Price Stabilization.

The firm is charged with having made over-ceiling sales of titanium dioxide between February 28, 1951, and June 30, 1951, the actual overcharges totaling $26,059. In the actions, OPS seeks an injunction to restrain the firm from violating OPS regulations, and asks for treble damages of $78,177.

Titanium dioxide, according to OPS, is a paint pigment in scarce supply. It is manufactured by only four concerns in the country, and closely allocated to regular customers. The Monomer company, organized in November, 1950, for the manufacture of synthetic resins for textiles and adhesives, purchased 98,700 pounds of titanium dioxide from Milprint, Inc., of Stoughton, Wis., a manufacturer of printed cellophane and pliofilm, and sold it at various prices up to 80 cents per pound when the ceiling price was 24 cents a pound, OPS states.

Waste Paper Action Filed On West Coast

The OPS's first West Coast waste paper and scrap material suit was filed by the Department of Justice in the United States District Court at San Francisco against the Independent Paper Stock Co., 650 Seventh Street, that city, on February 29. The action asks treble damages of more than $750,000.

An injunction to restrain the firm from further violation of OPS regulations is sought in addition to the treble damages on actual overcharges of $251,525 for the period from January 26, 1951, to July 31, 1951. OPS alleges that the company both bought and sold waste paper and scrap at overceiling prices, failed to establish ceiling prices and failed to comply with OPS record keeping requirements.

According to OPS, the firm, which is engaged in the purchase and sale of waste paper, scrap metal, rags and other scrap material, is the largest dealer in that industry on the West Coast with 10 branch offices between San Francisco and Seattle.

Edward P. Morgan, national OPS Enforcement Director, stated in Washington that several other similar cases are under investigation on the West Coast.

O.P.S. Staff Changes

M. W. Smith, Jr., assistant director, replaces R. I. Worrell as director of Forest Products Division. M. C. Walsh became assistant director; Andrew M. McBurney becomes chief, Pulp, Paper and Paperboard Branch. C. E. Carpenter is now the assistant chief of the Branch.

Sweden Shows Concern

The concern of the Swedish Government has been expressed to the British, French and Belgian Governments over OEEC plans to restrict imports of paper and to fix maximum prices of pulp.

Sweden claims such action is not in accordance with agreements binding the member states, and suggests further discussion to solve Europe's pulp and paper problems.

It would seem that price control has spread from the U. S. A. to Britain and may be put into effect in France and Belgium.

Table I shows the comparison between U. S. and British maximum prices. Contracts in force prior to February 11 at figures higher than the maximum will be granted British import licenses.

Comparison of Woodpulp Ceilings
U.S.A. and Great Britain
£ = $2.80

	Great Britain C.I.F.	U.S.A. ex dock
Sulphite Pulp		
Bleached	$246.00	$225.00
Partly Bleached	242.00	.....
Easy Bleaching	235.50	.....
Bleachable	230.00	200.00
Strong	224.00	.....
Sulphate and Soda Pulp		
Bleached	248.24	230.00
Partly Bleached	244.56	.....
Easy Bleaching	232.56	.....
Bleachable	228.16	200.00
Kraft	224.00	.....
Mechanical Pulp	109.00	.....
Deduct for half price	$2.80	
2nd quality	6.30	

Mexican Sulphur Production Rise

Mexico's sulphur production for the current year is estimated at approximately 60,000 tons, according to a report issued by the National Sulphur Commission, an organization created when Mexico joined the International Sulphur Committee. Production for 1951 was 54,000 tons and national consumption accounted for 50,642 tons. Of this total, the Mexican paper industry received 1,500 tons while amount allowed for export somewhat over 3,000 tons.

Sulphur production in Mexico will continue to rise over 1951 production, officials of the National Bank of Foreign Trade stated. If the 60,000 ton quota for this year is met, then the export quota of 12,000 tons fixed by the international sulphur committee will be met. However, the National Department of Economy has issued a statement that no exports of sulphur will be authorized by the government "until needs of the domestic market are fully satisfied." This precautionary measure is being taken to see that the local market receives all the sulphur it requires, and to thwart any moves made by foreign buyers to obtain sulphur from local markets.

A bank spokesman was optimistic, however, that Mexico is well on its way as an important sulphur producing nation, with exports increasing in volume as production rises. For the present, a major part of sulphur exports are destined for Canada for newsprint manufacture.

Breakdown of 1951 production figures shows that Petróleos Mexicanos, government oil monopoly, which first began to produce sulphur from sulphuric gases produced by the nation's oil fields, attained a total production of 30,000 tons from Poza Rica fields alone. Pemex is installing new desulphurization plants and production this year is expected to rise considerably. The balance of 24,000 tons of sulphur produced last year came from sulphur deposits in the country. This year, the government intends to begin large-scale exploitation of sulphur deposits in the area of the isthmus of Tehuantepec. However, peak operation is not expected until next year, when as a result of yields from Tehuantepec, the government expects to more than double the 60,000 tons estimate for this year.

Government authorities point to the fact that full exploitation of natural deposits of sulphur found within the country, augmented by sulphur extracted by Pemex, will place the country in a privileged position as a sulphur source, especially since the reported near exhaustion of sulphur deposits in Texas. In the first instance, the Canadian government will benefit from exports in keeping with the barter agreement where Canada promised to increase newsprint quotas to Mexico in exchange for sulphur.

Industry Has Safer Year

The National Safety Council reports the 1951 accident frequency rate in its Pulp and Paper Division is down 1 percent, in the Paper Converting Division down 15 percent over 1950. In the A group Kimberly-Clark, Kimberly mill won top honors, followed by Ecusta Paper Co. and Price Bros. Kenogami mill.

The group B leaders were Fraser's Madawaska, West Virginia Tyrone and Consolidated's Laurentide Div.

In group C, West Virginia's Williamsburg and Congoleum Nairn, Cedarhurst tied, with perfect records of no accidents.

In group D, Certain-Teed, Marseilles; Mead, Manistique; U. S. Gypsum, Oakmont; Marathon, Ashland; Fry Roofing, Compton; Mead, Nashville; Reigal, Reigalville; Johns-Manville, Tilton; Volney Felt, Mishawaka; and Spalding Fiber, Hayes Plant; all tied for first place, with perfect safety records.

3 Cent Raise for Oxford?

United Mine Workers Union members voted to accept a three-cent-an-hour pay increase offered by Oxford Paper Co. If approved by the Wage Stabilization Board, 2,400 workers will get the increase retroactive to January 1.

PULPWOOD—No. I of Series

Research and Pulpwood Production*

Dr. Lincoln R. Thiesmeyer
President, Pulp and Paper Research Institute of Canada

The broadest claim that has ever been made for research is that it is the basic insurance of a company's future. The validity of that statement has been demonstrated often and completely for many companies and for whole industries during the past quarter-century. The result is that today the average expenditure for research and development in the manufacturing industries of the United States is, I am told, about two cents out of every sales dollar. We in Canada are not yet doing as well, but we are learning the same lessons. Moreover, in both countries the importance of research to industrial progress and thereby to national economic health is recognized by our respective Governments. Our tax laws now provide strong inducement to increased investments in research by permitting deductions of up to five percent of the net corporate income before taxes for research as a part of operating costs. To some companies, notably in the chemicals industry, a vigorous and sustained program of research is so important that research expenditures reach nearly seven cents per sales dollar, even though that may exceed the limits for which tax relief is provided. Their willingness to gamble such sums arises from a recognition that about two-thirds of their ever-growing sales volume comes from products, developed through their research, that did not exist some ten to twenty years ago.

Happily or otherwise, we live in an age when television, plastics, penicillin, jet aircraft, guided missiles and atomic artillery have all been translated from the laboratory to the production line within the short span of our own memories. We should need no more convincing evidence that, when the ingenuities and skills of man are properly marshalled and supported, the pay-off in comfort, health, defense and dollars is rather immediate and may even be spectacular. There are many examples to prove the point. A few may serve to emphasize it. We can all remember when the discovery of penicillin and other antibiotics, cortisone and ACTH were first announced. Last year the combined production of these life-prolonging substances represented over half a billion dollars worth of business to the pharmaceuticals industry of this country. I read the other day that within a single year from the discovery of a new antibiotic one company had developed methods for making it in quantity and had it regularly available to the world of medicine. In the field of synthetic fibers, we can all recall the early days of nylon, developed at a cost of some twenty millions and now applied so generally, from the intimate garments of our lady friends to the sexless associations of a tire cord or a fishing line. What a commentary it is on the way research can be expected to pay off, is that the same manufacturer has spent some sixteen million more to perfect yet another synthetic fiber, dacron, which may replace a part of the market only recently won for nylon at so great a cost.

That kind of courage and imagination is exemplified also in the atomic energy program. In his book, "This I Do Believe," Mr. David Lilienthal, whom many Americans have probably heard of, says that the Atomic Energy Commission has been very busy spending hundreds of millions of the public's dollars in an effort to make obsolete just as quickly as possible equipment and processes that only recently also cost hundreds of millions of the public's dollars. He concludes that this is the way to progress. And now we can read in the latest Semi-Annual Report of the AEC that a plant worth nearly one hundred and fifty millions is being written off as obsolete. The events of recent months on the desert in Nevada and the confident statements by our military leaders that we are well ahead of all competitors suggest that the progress has been phenomenal, that the unprecedented investment in research has paid off already.

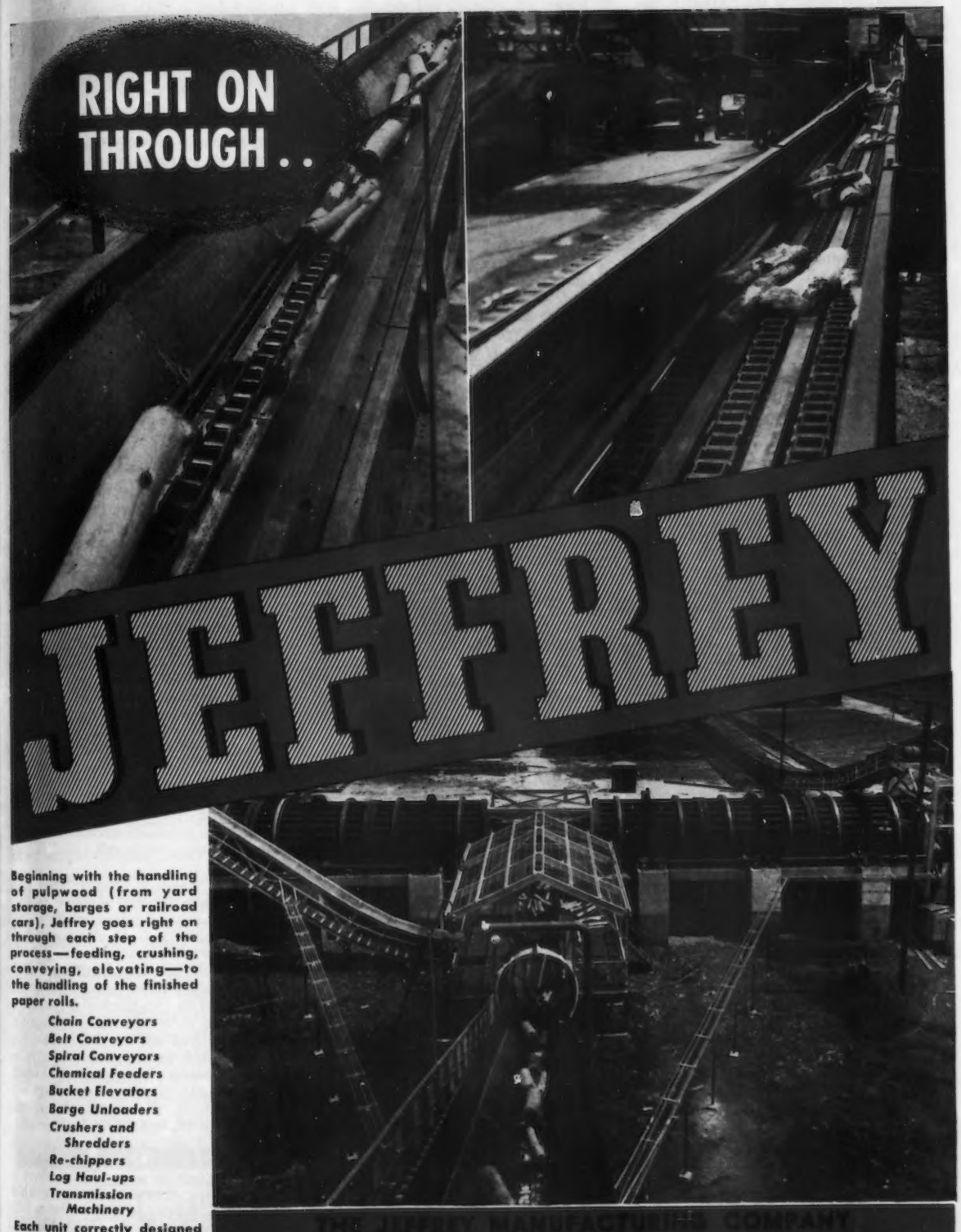
Those who are concerned with maintaining an ever-increasing flow of pulpwood to the mills of our pulp and paper industry are today, more than ever before, the custodians of its future. We need no crystal ball to see the world demand for pulp and paper products rising sharply in the years ahead as the standard of living in all free nations goes up. The gigantic investments now being made in new mills and in the modernization and expansion of old ones on this continent are concrete evidence of a broad confidence that the curve of demand will be upward for some time to come. (There are always, of course, prophets of doom who warn that we may be over-expanding and who point back with alarm to the nineteen-thirties as a period when our industry paid bitterly for what they choose to call an unrealistic expansion in the late twenties. But it has recently been pointed out that just as good a case can be made that the real source of the extremely low status of our industry at that time was weak management.) Even if the cold war should suddenly warm up, the demand for pulp and paper products would remain strong. That was so cogently demonstrated in World War II that both the U. S. and Canadian Governments have now recognized our industry as essential to the national defense. Satisfying that mounting demand, whether for peace or for war, means adequate supplies of pulpwood primarily. (In this audience I can with impunity almost omit reference to the as yet small competitive sources of cellulose fiber in straw, bagasse, esparto and other non-arboreal crops.)

So it is appropriate that those who share a responsibility for the future of pulp and paper—the research man and the producer of the raw material—should examine some of the many ways in which the activities of the one may influence the effectiveness of the other. The linking of research and pulpwood production in the title of my remarks implies, indeed, that there is an interrelationship, one that is receiving greater recognition these days.

I am told that today over half of the cost per ton of the pulp and paper end-products of our industry lies in the cost of the wood as it is delivered to the mill. Under such conditions the woodlands operators are at long last coming into their own—in personal recognition, in compensation for their efforts, in essentiality. The same thing happened to the geologists a decade or two ago when the petroleum resources of the world seemed to be on the verge of exhaustion. One may note in passing that geologists today hold a dominant position in our major oil companies. (That should give heart to many a young forester who has been struggling along as no more than a timber cruiser.)

A brief review of trends in the pulp and paper industry in North America during the past half century may serve to strengthen the conclusion that the

* Presented at the Annual Open Meeting, American Pulpwood Assn., February 20, 1952.



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Prior to World War I papermaking was regarded as an art. (Parenthetically, one should probably remark that in a few backward minds it still is!) Rags were then a major raw material. Wood was cheap and seemingly inexhaustible on this continent. Machines were slow, and profits poured in without benefit of research. Both in the woods and in the mills the practical operator was in command.

Events in the Balkans in 1914 touched off a period of rapid expansion. The stimuli of greater demand and rising prices led to competition and that, in turn, to pressure for greater efficiency in manufacturing. Machines were speeded up, technical controls were developed and the engineer began to take charge. The research man began to demonstrate that he could modify production to adapt it to new uses and the whole character of our industry began to change from a largely empirical one to a more "exact" science.

After the war the kraft process began to play a major role in pulp manufacturing. It permitted the use of more wood species. Its continuous recovery systems for chemicals and the burning of the residual liquors to provide power made it strongly competitive with sulphite pulping. I am bound to point out, in passing, that the Canadians had a large part in making the kraft process so prominent a factor in our industry—so prominent, in fact, that today the total cut of wood to feed some sixty kraft mills in the southern United States is almost equal to the entire cut of coniferous woods north of the border. Perhaps I should say that with mixed emotions!

Then came the years of the Great Depression. The less said about them the faster we can get on with this review. Long before that, however, there had been great capital investments in new mills and expanded production capacity and it had become evident that the problem of continuing wood supplies was a serious one. The forester and the logging engineer began to be noticed by some of the more enlightened managements.

World War II brought another period of strong demand for pulp and paper. The use of pulp in explosives and of paper and board in the myriad packaging requirements of the Armed Forces, and as substitutes for more critical materials, expanded phenomenally. Machines were speeded up again, equipment was modernized, and all sorts of new process control instrumentation were developed. Because of its capacity for producing a wider variety of packaging materials, the kraft process began to replace sulphite as the dominant chemical pulping operation. And, again, the problem of adequate wood supplies was intensisified. Our industry, finding it difficult to meet the need economically from cutting on the lands under its own control, increased sharply its purchases of wood from small woodlot owners. It began an educational campaign in the principles of sound forest management, both within its own operations and among those outside suppliers.

The post-war years have seen the demand for pulpwood rising continually. Costs have gone up again. Woods labour is scarce and becoming scarcer under the pressures of defense production in other fields. Seasonal, nomadic logging will no longer attract and hold an adequate labour supply, even at increased rates of pay, in competition with the stability of employment and other benefits offered by community life near a defense plant.

Again there is great emphasis on efficiency. And, since it is more difficult and more costly to increase the supply of pulpwood, attention is focussed on the better utilization of the wood that is available. This means reduction of waste both in the woodlands and in the mills. It means the use of materials that were formerly discarded, left to rot or to encourage fires in the bush, or poured down the sewers at the mill.

Consequently, research is again setting the stage for major advances in our industry. New methods of cooking and refining of pulps to increase the yield of useful fiber are under intensive study. Vigorous efforts are being made to speed up still further paper machines that are already going at a rate that would have nauseated the papermakers of the twenties. At long last this industry is taking seriously the repeated assurances of the wood chemist that there are values in the waste liquors from a chemical pulping operation that may far exceed those of the cellulose fiber. New plants to extract vanillin are multiplying. The day is not so remote when our industry will use everything including the leaves and needles—and perhaps even the smells which in some cases it now spreads so generously over its neighborhood. There may even emerge from all of this research activity a revolutionary new way of making paper and board.

Because research and development in the manufacturing phases of the industry has been far ahead of research in pulpwood operations, and because there are many more people engaged in it, some of these changes may come rather quickly. They will have their pay-offs—which may well be in scores of millions. On the other hand, some of these changes will require major modifications or obsolescence of large capital plant. And there is a certain perfectly human inertia about scrapping something that is currently paying the rent, or about shutting down and losing production in order to install an improvement, even though that improvement may hold a hope of paying both the rent and the taxes.

In my opinion, through research during the next ten years there is more money to be made or saved in the pulpwood operations of North America than has been made or saved by improvements in pulp and paper manufacturing methods during the past twenty-five. That means billions of dollars because our industry holds such a prominent place in the economy of both countries—first in Canada, and about seventh in the United States. If the statement seems wild, remember that we are dealing with depreciated dollars. In fact, I am making this bold forecast in a land where the recent trend seems to be toward a rather soft currency—so soft, indeed, that we in Canada just love to touch it!

Dean Thomas Sherwood of M.I.T. has pointed out that the thing which distinguishes modern technology and makes possible our amazingly rapid advances in applied science is teamwork. The scientists of today are not one whit smarter than those of fifty years ago (though I must admit that some of them seem to think they know a good deal more about politics). The time lapse between a discovery in the laboratory and the universal marketing of a gadget that makes use of it is getting shorter. This is because all the diverse skills of the industrial world are brought into play.

To apply that principle to the pulp and paper industry means a marshalling of all the scientific, engineering and other skilled manpower resources that can contribute to the desired end result — more production of improved and diversified materials at low cost for an expanding market. The activities of the suppliers of the raw materials, the manufacturers of the equipment and the control instruments, the operators in the mills, and even the sales departments must all be integrated in the common purpose. The extent to which that can be achieved will largely determine the extent and the rate of technological progress in our industry for the years ahead. The whole world, except that part which lies behind the Iron Curtain, has learned the value of group effort and cooperation in every sphere of human endeavour.

When a research program has paid off in dollars to our industry it is a waste of time, in my opinion, to try to identify the individual or group in the organization that should get the credit for the increased profits. Surely they would not have come without the brilliance of the research man, whether he be in the raw materials or the manufacturing end of the business. But neither would the improvements have been demonstrated in commercial operations without the understanding and cooperation of the operators in the forest or in the mill. And often they would not have paid off without the vigorous efforts of the sales force to market the new or improved product in competition. Circumstances may alter cases, but I submit that it is the *whole team* that produces the desirable end result. The ball may be carried chiefly by the halfback in woods operations or in manufacturing; but he can't even make a first down without effective blocking by his team-mates. And, as in football, one cannot always tell which ones will throw the telling blocks that pave the way to a score.

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For all too long in many places the foresters and logging engineers of one company have had to work almost in a vacuum, not even being allowed, let alone encouraged, to visit the mills operated by that same company, to become aware of manufacturing problems first-hand and think of ways in which the handling of the wood might help to solve some of them. Today there is increasing awareness of the absolute necessity for teamwork in the pulp and paper industry. Progressive companies are getting much better coordination of objectives by establishing improved communications between their woodlands workers and their mill departments. This means integrating the pulpwood group into the rest of the team.

Such integration is stimulated and aided also by a recognition that fields of science that have previously been brought to bear chiefly on the processing of pulpwood after it gets to the mill yard may prove exceedingly useful also in the whole cycle from the growing seed to the jackladder. Later this morning we are to hear how the magic of chemistry can affect the living tree in ways that reduce the labor and the cost of harvesting that tree, and may even have benefits in the mill.

Not so many years ago a woodlands research worker was thought of as simply a long-haired forester concerned with experiments in silviculture that would not prove their worth for a generation or two — a chap to be humored a bit but not taken too seriously since the wood supply seemed enormous anyway. Then, when all kinds of mechanical equipment became available, the engineer became a rather important character in the mechanization of woods operations, especially in the western country where the huge size of the logs made machines not only welcome relief from ardous toil, but thoroughly practical. Now the chemist and the biologist are beginning to play important roles in pulpwood production. Soon the economist, the meteorologist, the soil scientist and even the psychologist with his time-motion techniques will be common figures in pulpwood research. (I can think of a place or two where a good psychiatrist would be kept busy, too; but I hope those are the exceptions.) In short, it will be no more accurate to say that forest research is the peculiar province of the forester than to say that research in pulpmaking is that of the chemist. Indeed, for many problems in forestry only an all-out attack by a task force drawn from many fields of specialized training will be sufficient. Token research is never conclusive and is therefore money wasted.

Now that we smart people in North America, who have been so profligate with our resources, have learned the kindergarten lesson that they are, after all, not inexhaustible, the clamor for conservation is deafening. Happily, our forest resources are renewable and we are now beginning to practice forest-management techniques to produce a steady yield in perpetuity — a thing our less fortunate cousins in the Baltic area have been doing for generations. We have discovered rather quickly that forest management is highly complex, that it requires all sorts of detailed knowledge that never seemed important before, knowledge that only specialists can develop. To get it takes time and effort and money. But have it we must, if we are to stay in production. And we are learning too that a forest is like a human organism in its variability, that a treatment which works well in one case may fail miserably in another. Moreover, we are discovering that even a single tree is more sensitive, more responsive to slight changes in its environment, more animal-like in its behaviour perhaps, than most of us had supposed.

All these things have been known, of course, for a long time to the foresters, the plant physiologists and other wizards of science in our academic halls. So were many of the factors controlling the occurrence of petroleum known to geologists, both within and without the employ of oil companies, long before their knowledge was finally applied to the problem of multiplying the known reserves. Fear of exhausting the supply of a non-renewable resource was the stimulus that brought the capital, the organizational genius and the pressure for results of a great industry into play. If the analogy holds at all, one can easily see what staggering returns may come when our industry turns the same kind of financial and other support into a man-sized effort to apply and to extend the wealth of accumulated knowledge in many sciences to the problems of pulpwood production from seed-bed to block-pile. Cherishing such concepts and having a precedent to point to within the field of my own professional training as a geologist, I can hazard the prediction I made a few minutes ago about the megabucks that our industry can and will save in the woods when its attention is drawn sharply enough to the opportunity and the challenge.

The threat of losing its raw material has brought our industry's attention more vividly to the magnitude of losses from the enemies of the forest —fire, insects and disease—which, as you know, together destroy more trees annually than are cut for pulpwood. Pulp and paper companies have taken the lead in far-flung programs of public education to decrease the fire hazards from human carelessness. Such campaigns are having notable, immediate results. I read the other day that in the State of Washington the fire losses in 1951 amounted to only 7500 acres whereas two years before they had been over 40,000 acres, nearly five times as high.

Research in fire suppression from the air is also beginning to show promise of widespread benefits. Q. F. Hess, District Forester of the Ontario Department of Lands and Forests, has developed a technique of aerial bombing small fires in inaccessible country with paper bags holding four gallons of water before the fires get a chance to spread and long before ground crews could get to them. Eight water bombs can be dropped in salvo to wet a swath nearly 200 feet long by 20 feet in width. Since the plane holds twenty bags at a time, nearly a ton and a half of water can be dropped on a fire in this fashion in an elapsed time of less than an hour. If certain wetting agents that increase the "wetness" of the water by as much as 18 times can be used in these bombs, the total effect should be remarkable. This bombing technique has been so successful in tests on actual fires in Ontario that the Department plans to apply it as a general operating practice.

Perhaps while we are on the subject of fire I should mention also that a technique has now been developed and demonstrated in the pine-oak forests of New Jersey that converts fire from an enemy into a valuable helper. Under certain prescribed conditions controlled fires may be set deliberately. This reduces the danger from "wild" fires in the scrub oak and favors the development of the fast-growing hard pines over the defective and slow-growing oaks. In this way man has again found a way to humor nature and bend her to his purposes in forest management.

Recent years have witnessed a rapid expansion in the use of aircraft for surveying and inventory in woods operations. Now it is coming into use for the dusting of tree crops with insecticides, just as it has been used for dusting agricultural crops for a long time. This spring the Provincial Government and the New Brunswick International Paper Company will spray a vast area in New Brunswick with DDT as an Easter gift to the spruce budworm.

These few examples of the applications of science and technology to problems of our industry, which could, of course, be multiplied and of which you gentlemen know many more than I do, lead me to another point. To our intensive, all-out research efforts to maintain and improve pulpwood production we must bring not only many varied sciences and engineering skills but also all of the latest tools that our mechanized world has at its command. The first key to good research is good men; the second is the very best and sharpest tools. And that, in turn, leads me to one of my favorite subjects — the applications of atomic energy to the pulp and paper industry.

Someone has said that the two most important words in the English language today are not, as many might suppose, "atomic energy," but the two shorter words "not yet." We dare no longer say that anything is impossible; we can only admit that it has *not yet* been done. So I shall not speak of fuel pills in your bulldozers or magic rays that will cut through the butt of

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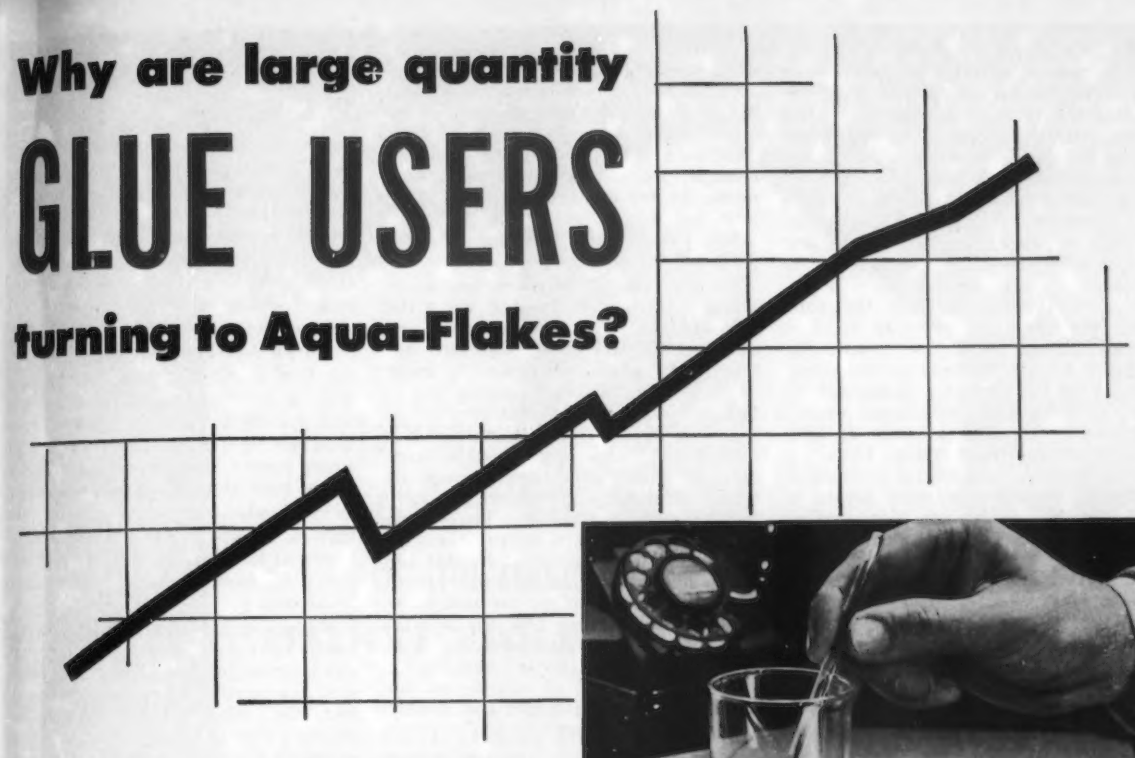

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a forest giant in a second or less — not because I believe such things are impossible but because I wish to focus on things more immediately attainable.

All over the world today scientists are probing the life processes of plant organisms with radioisotope tracers. They are learning things that could never previously be known because so often it was necessary to kill the organism to study it. These tracers can be injected into the plant as a hypodermic or taken up from the soil. Wherever they go they can be followed because they are constantly emitting minute amounts of radiation, like the transmitter of a walkie-talkie. And we have sufficiently sensitive receivers to pick that radiation up and even to measure its amount. Thus, we have a powerful method for learning a great deal about how trees get their nourishment and convert it into cellulose fiber, which chemical elements are absolutely essential to their health and which ones are harmful, how interdependent trees are through natural root grafts, etc. Such knowledge is clearly essential to success in the problem of encouraging the growth of a tree for a particular purpose — handtailoring the tree crop to suit the end-use in view — which may well become an even more dominant objective of forest management in the future than it has been.

Another promising line is investigation of the genetic effects produced by deliberate irradiation of seeds or whole plants. Recently the Brookhaven National Laboratory on Long Island announced that the rate of mutations in a certain species of corn had been increased seventeen thousand times through subjecting it to radiation. Mutation is the two dollar word applied to those mysterious, naturally-occurring changes that cause variations in organisms and that have led to the evolution of species. (You may recall that it is through mutations that strains of bacteria resistant to our wonder drugs have been developing in the past few years.) Out of such experiments at a tree nursery or a forest experiment station might come the new strain of a tree species — more resistant to diseases perhaps, or faster-growing, or having greater density of useful fiber per unit volume, or with greater floatability, etc. Irradiation of a whole forest might not be allowed— although no one seemed excited by the radioactive snow that fell in several northern parts of this continent following the tests in Nevada. But the scattering by aircraft of the seed from a marvelous new strain of fast-growing spruce developed through irradiation would probably be welcomed — especially in this country.

Then there is the matter of developing atomic cocktails for the various sawflies and other hostile denizens of our shaded acres, not to mention a potion or two for the terrible teredo that wrecks such havoc on western logs in salt water. These radioactive materials burn themselves out like sparklers. Some burn out in millionths of a second; others last almost forever. But among the more than eight hundred isotopes now known (and the others to be discovered) surely there must be one that would last just long enough to deal a lethal blow to these pests, do no damage to the wooden host they invade, and yet not shine out at a person from the pages of his daily paper.

In this research business one never knows in what unexpected ways the pay-offs will come. Some months ago at the Pulp and Paper Research Institute of Canada we agreed to study the corrosion of kraft pulping equipment. We wanted an instrument that would be more sensitive, more accurate, more flexible than those in existence for measuring the thickness of steel containers. We asked for help from isotope specialists. They came up with a gadget called the Gammagage that will not only do the job for us but that can be used to measure the density of wood or the soundness of a standing tree. Do you wonder that I find it difficult to refrain from "riding the atomic horse" and urging that this new tool of science be put to use wherever it might conceivably have any application?

The labor shortage in the woods and the availability of lightweight portable equipment are combining at the present time to speed mechanization of pulpwood operations, even in Eastern Canada. A recent report of the Cutting Tools Committee of the Canadian Pulp and Paper Association shows that power saws are rapidly coming into that area and that they bring a 30-50 percent increase in production. Portable chippers will, like the portable saw-mill, soon be common in the woods and on the woodlots, providing chips for pulp or for fertilizer and reducing the fire hazards from slash. The tractor is taking over much of the skidding and hauling on smooth terrain, just as it has taken over all sorts of functions on the farm. Wire cableways are proving practical for skidding pulpwood by gravity over intermediate and steep slopes—practical, incidentally, because of a simple, expendable and dirt-cheap wooden attachment developed by our Research Institute in Canada. New types of loaders, trailers, yarding equipment and trucks are invading the forest. The whinneying of horses is fast giving way to the shrill whine of cables and the soft clumping of their hooves in the snow to the measured throbbing of the diesel engine.

In the laboratories and pilot plants and even at some of the mills new processes are speeding the utilization of what were, only yesterday, waste materials. Weed species are becoming useful species; barking may soon be obsolete at some mills; waste liquors are being processed to extract some of the wealth in organic chemicals they contain; new ways of making paper and board are under study.

Projecting a combination of these trends into the future, it may not be too imaginative to speculate that someday we will be through with bucking, scaling, yarding, hauling, river driving and many of the things we now do to get the wood from the stump to the wood-yard of a mill. Large but mobile units may go into the forest, take a whole tree — needles, twigs, branches, leaves, bark, and perhaps even roots — and pulverize it on the spot. Separated in a powerful centrifuge, the various fractions will then be blown into tank-trucks or even into overland pipelines through which they will be conveyed, by fluidizing them with air, to a battery of units resembling an oil refinery (portable too in some cases) for processing into a whole host of products not now made by the pulp and paper industry. In such a set-up paper and paperboard would at last, as has so long been predicted by men of science, become the by-products.

Under such conditions the woodlands operators could devote their chief attention to silviculture, genetics, forest pathology, tree physiology and the whole range of applied sciences that are today too much neglected in the more urgent pressure to get the largest amount of wood out at the lowest possible cost.

But I have been speaking about a sylvan Utopia. It may be that the grandchildren of the woodlands operators will be the first to see it. Between now and then there is much to do to keep the paper machines running and the digesters full. The challenge to make broader application of scientific and engineering knowledge to pulpwood operations is clear. The pay-off can be enormous. Research points the way, and the time to start was the day before yesterday.

Last Giant Felled in B. C.

At Saanich, B. C., there was once a thick, virgin fir forest. Half a century ago the area was logged and a quarter century ago a fire swept the area. One giant six centuries old withstood all this and dominated the area until a few weeks ago when it was felled because its huge branches had become a menace to life and power lines.

The enormous tree had become a well known landmark to the residents of Saanich who called it Old Jonathan or King Tree. The trunk was 250 feet high and nearly nine feet in diameter at the butt. Some of the logs being carried away from it weigh as much as eight tons. The noise of the giant falling was heard for miles around, and some people shed a silent tear for the old tree.

When Columbus came to the New World it was an old tree; it had seen three centuries when Champlain first came to Canada. With the tree goes one of the last tangible local links with the past.

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Aniline Printing In Carton Industry*

Frank A. Dick

Assistant to the Executive Vice-President, Interchemical Corp., Printing Ink Division (IPI), Chicago

Editor's Note: Aniline printing, which has attained such popularity in printing glassines and plastic films for candy and food wraps and bags that the "aniline-type" ink business of a leading manufacturer has increased 3,000% since 1940, now has its foot inside the door of the folding paper box industry. Although aniline still cannot be employed to produce the wide variety of work done by other processes, particularly where fine screens are involved, the number of different products packaged in aniline-printed cartons has been growing steadily for the past six or eight years.

Aniline printing is today a misnomer, since aniline dyes are no longer needed in making the inks employed in this quick-drying, rotary rubber-plate process. The process originated in 1890 in England, when a Mr. Holweg, a bag machine inventor, discovered that he could make a quick-drying, fast flowing printing ink from aniline dyes by dissolving them in alcohol and that the resulting product did not attack rubber press rollers and plates. He built and patented a combination rotary printing press and bag machine, Mr. Dick said.

An aniline printing press consists basically of an ink fountain, fountain roller, transfer roller (usually etched with 140 to 210 lines per inch for more positive control of ink distribution), plate cylinder and impression roller, Mr. Dick explained.

Sizes of aniline presses now in use, according to Mr. Dick, vary from 1-inch-wide tape-printing devices to a press that prints a 130-inch web. As an indication of practical printing speeds attainable on an aniline press, he remarked that one 118-inch aniline press now in use runs at speeds up to 1,600 feet per minute.

Because plate cylinders may be quickly changed and the fountain, fountain roller and transfer roller assembly of most aniline presses may be moved forward or back to accommodate smaller or larger plate cylinders, aniline printing lends itself to speedy, economical changes in cut-off lengths of the web.

When running porous stock, aniline needs no special drying equipment, even at high speeds. Plastic film and other hard-surface stocks often require dryers, such as forced hot air, super-heated steam or infra red.

In addition to presses now being manufactured for printing carton board or for general printing of paper, Mr. Dick cited an aniline printing device which may be built into a roller conveyor so that filled corrugated shipping containers may be printed on 4 or 5 sides in the container-user's plant. One company claimed that it had reduced its container inventory to one-sixth of the quantity of printed containers formerly kept on hand. Only relatively simple printing is handled by the process to date, however.

Mr. Dick said that the advent of Buna-N synthetic rubber has greatly increased the number of solvents which may be used in aniline printing. (Alcohol still is the principal solvent, although regular pigments used in oil inks have replaced aniline dyes in aniline-type inks.)

Aniline plate making has become a fine art in the past 5 years, Mr. Dick explained. He said that properly prepared plates, affixed to the plate cylinder, can be so completely made-ready that only the slightest adjustments are necessary when put on the press. Furthermore, practically any of these adjustments can be made while the press is running.

One new plate making idea mentioned by Mr. Dick involves the use of a wire screen in the base of the plate to control shrinkage, usually a problem in aniline plate-making.

Composition of 80 percent of modern "aniline" ink is pigment, ethyl-alcohol solvent and a suitable resin. Water-base inks are used for some types of printing but in general do not produce the best quality work. Drying action of solvent-type aniline inks is the same as that of women's nail polish or any other lacquer—by evaporation. Oil-base inks dry like house paint —by oxidation.

Pointing out that the original installation cost of an aniline-printing, in-line-die-cutting-carton-combination is only about one-third to one-half that of the necessary sheet-fed letterpress equipment, Mr. Dick also stated that an aniline press crew may be trained in much less time than required for letterpressmen. He remarked that changing printing plates or forms is markedly faster on an aniline press than on a letterpress.

Among the special qualities of aniline inks described by Mr. Dick are that they are virtually odorless upon drying and they dry so fast that the offset problem is entirely eliminated in all but a few instances.

At present, the handicaps of the aniline process are those of the rubber printing plate. In general, present screen work on aniline is done with 65 or 80 lines per inch.

Press runs of one million impressions from one set of plates are normal for aniline, with some running to six million on non-abrasive stock.

A disadvantage of aniline printing of folding cartons is that there "is no real chance of obtaining a semi or full gloss with present inks," Mr. Dick said. He pointed out, however, the ease with which a full gloss is obtained with a coat of varnish, which, in the aniline process, is applied in the same operation as is the printing, at a definitely lower cost than letterpress or other varnishing methods.

One of the special advantages of aniline printing is that the final result can be seen almost immediately after the impression is made by the press since there is virtually no waiting for ink to dry or set, as is the case when printing with oil inks.

The same colors, shades and hues obtainable in oil printing inks are also available in aniline inks since pigments used for the former are also used for the latter.

The following were among the topics discussed in the question and answer period after Mr. Dick's talk:

Q. Is print from water base aniline inks water resistant?

A. With present inks it is after about 2 weeks' aging. A new ink, just developed, promises to give water resistant results almost immediately after printing.

Q. How much is the gloss obtainable improved in printing folding cartons by using clay coated stock?

A. None, with present aniline inks.

Q. If "aniline" is a misnomer, what is the correct designation for the process?

A. "Aniline," at present, since various organizations trying to develop a new name have not come up with a final suggestion.

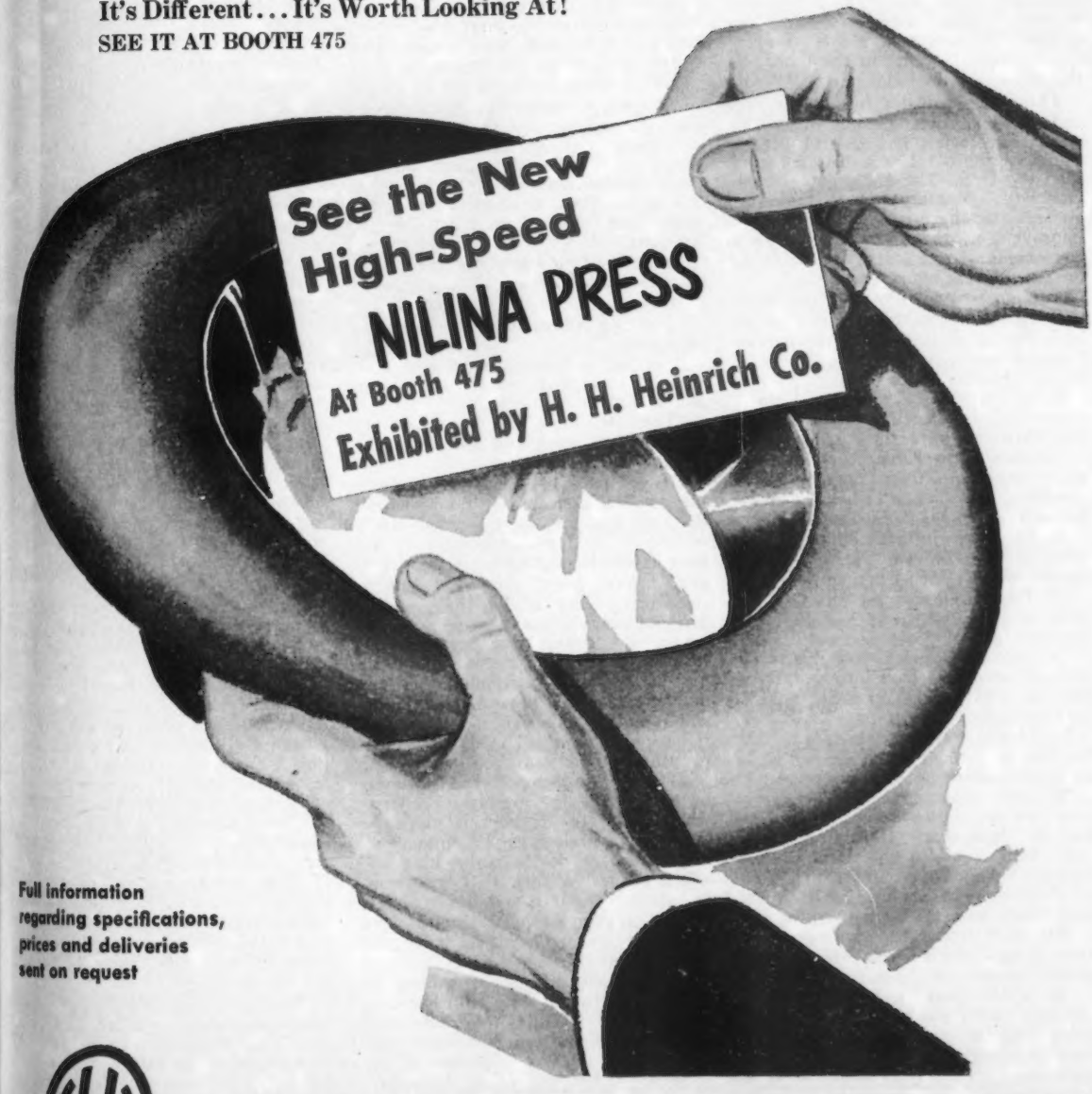
Q. What effect does the aniline system have on paper de-inking or pulp recovery?

A. Recovery about the same as for oil inks.

* Presented before the February Meeting of Chicago TAPPI.

Something to Paste in your Hat!

When you visit the PACKAGING SHOW in ATLANTIC CITY, April 1st to 4th, Don't fail to see the New High-Speed NILINA PRESS, featured at the H. H. HEINRICH EXHIBIT ... It's New ... It's Different ... It's Worth Looking At! SEE IT AT BOOTH 475



Full information regarding specifications, prices and deliveries sent on request

H. H. HEINRICH COMPANY 200 VARICK STREET, NEW YORK 14

Q. Can you get as good a rub test on aniline-printing as on oil ink?

A. Yes, in general.

Q. Can you hold good register on an aniline press?

A. Yes, but varies with press, stock and type of work.

Q. Does aniline present a fire hazard?

A. Yes, but proper ink storage room greatly lessens it and proper ventilation at press gives excellent control of the hazard under normal atmospheric conditions.

Q. How about toxicity problem?

A. Usually the solvent is ethyl alcohol and is not especially toxic except in extremely heavy doses.

Produce Safely

Safety is so often taken for granted or its accomplishments are passed over, because they often make dull reading.

On the other hand few and far between are those who have no interest in safety. More often are found the people who accept accidents as natural or normal events in the home, on the street and in industry.

The paper industry has a fair record over all, some sections of the industry have better records than others. Canada probably has a better record than the U. S. The one point in common with all safety men is, that they all feel that there is room for marked improvement, that safety work is a continuous process, that you must be on the job each and every day.

The most recent live wire organization with real accomplishment that we have heard of is the NORTHWESTERN BRANCH OF THE ONTARIO PULP & PAPER MAKERS SAFETY ASSN.

F. O. Soughton, Long Lac Pulp & Paper Co., Terrace Bay, Ontario, general chairman, reports:

"Statistically speaking, here are the most important facts regarding the combined gains made by our 11 member mills since the 1948 meeting:

"1. Lost-time injuries have dropped from 447 in 1948 to 199 in 1951, an improvement of 55.44 percent.

"2. The frequency rate has dropped from 31.2 in 1948 to 13.9 in 1951, an improvement of 55.44 percent.

"3. Actual work days lost due to on the job accidents have dropped from 6467 in 1948 to 4636 in 1951, a 28.31 percent improvement.

"4. Limited severity which was .320 in 1948 was reduced to .223 in 1951, an improvement of 30.31 percent.

"If our collective accident experience had not shown improvement during the past three years, we would have had an additional 680 lost-time injuries involving an extra time loss of 5445 work days or almost 44,000 man hours, ENOUGH MANPOWER TO RUN A 500 MAN MILL FOR AT LEAST TWO FULL WEEKS. Such is the extent of the actual manpower conserved by the gains which have been recorded by our 11 member mills in preventing accidents during the past 36 months. I need not digress to emphasize that quite apart from the economics of such conservation, it is impossible to measure the savings in blood, bones, agony, tears and broken lives which have resulted from our improved accident experience. Everyone is thoroughly acquainted with the evils which always accompany our industrial injuries. Some of the 1108 lost-time injuries (including 3 fatalities) which have occurred in our 11 mills during the past 4 years have left their indelible impressions on all of our minds. Apart from the fatalities, injured employes of our mills have lost more than 20,000 actual man days during this four year period. SUCH A TIME LOSS WOULD HAVE RUN A 500 MAN MILL FOR ALMOST 2 FULL MONTHS. This, we must not lose sight of, despite our more favorable experience during the past three years. By every means at our command we must continue to sell safety both up and down the line with an enthusiasm that will prove even more effective in the immediate future than it has done in the past.

"But how are we going to achieve the results which we all so earnestly desire?

"First of all we each need a plan of action.

"Second, we must be firmly convinced in our own minds that we can and will achieve results.

"Then, we must be prepared to put our plans to work and not 'spare the horses' in the process.

"In our plans we must include 'selling top-management.' I don't believe that any mill can have a good safety record if its top-management is not completely sold on having a good record. I have heard this point emphasized many times during the past two or three years by speakers from widely separated geographical locations on this continent and am now completely convinced in my own mind that any mill manager can have a most favorable accident experience in his plant if he insists upon it in the same manner that he uses to get quality and production results, and that is simply by letting his line organization know what is expected of them. At the same time I am convinced that top-management wants to do the right thing and will if properly informed. Consequently, when we go to sell our managements on some safety matter, we should be thoroughly armed with good ammunition.

"Of necessity, the statistical section of our report deals only with lost-time injuries and fatalities. *Consideration should be given also to two other types of accidents, if the true picture of our accident experience is to be appreciated. I refer to:*

"1. Those causing personal injury necessitating medical or first aid but no lost-time; and

"2. Accidents in which no personal injuries are suffered (eg, accidental damage to equipment or tools, or the simple unplanned act of a hammer slipping from a hand and dropping to a floor which is only time consuming).

"According to the Heinrich formula which is widely accepted throughout industry as the best ratio of accident types devised to date, the figures 1 - 29 — 300 are used. Simply stated, the formula means that for each lost-time injury there are 29 minor injuries and 300 accidents involving no personal injury.

"May I suggest that when you get back to your mills, you work out your own scores based on the Heinrich formula before you show the report to, or discuss with, anyone.

"Using this formula, the 1108 disabling injuries which our 11 mills experienced during the past 4 years indicate that we probably had more than 32,000 minor injuries and in excess of 33,000 other accidents where no injury was involved but where an accident occurred in the same way and from the same causes as minor or major injury cases. And so often accidents in any category result in serious damage to equipment as well as curtailment of production. *It is inconceivable that we should divorce safety any longer from production.* And in order that this may be so in all of our mills, our top-managements must sell and resell their supervisors on the necessity of continually thinking in terms of 'Quality Production with Safety.' The time worn 'Safety First' is outmoded and no longer adequate.

"In order to deal effectively with the various 'human' failures that cause so many of our accidents, our plans must call also for means whereby we may influence the minds of those who are our working force, which in reality includes *everyone* on our payrolls. I firmly believe that all too little attention is paid to creating 'safety consciousness' when it comes to promoting our safety programs. And by contrast, too much attention is focused on 'mechanical' hazards which constitute now only a small percentage of the whole. If 85 to 90 percent of all industrial injuries are directly connected with 'human' failures, I contend that 85-90 percent of our effort to prevent accidents in our mills should be beamed in that direction.

"Last year our 11 mills had a combined frequency rate of 13.9. This year I am hopeful that the rate will be reduced below 10 . . . a healthy 'bite' . . . but one which can be made with determination and the cooperation of all concerned with any phase of our respective safety programs."

THE SALES ARE ON, AND THERE IS NO BETTER BARGAIN TO BE HAD, THAN THIS PROGRAM OF THINK SAFETY, PRODUCE SAFELY, AND ENJOY LIVING.

Adaptable to Almost any Furnish . . .

UFORMITE 700

Fast Wet-Strength Resin

Food wrap is only one of *many* uses for UFORMITE 700 Wet-Strength Resin. It's adaptable to almost any furnish—groundwood, kraft, sulfite or rag; and to many end uses—bag stock, food wrap, blueprint, map, twisting tissue, glassine, liner board.

UFORMITE 700 gives you these advantages:—

(1) **Fast wet strength**—*right off the machine*
(2) **High efficiency**—*over a wide range of resin-to-pulp ratios*
(3) **Adaptability**—*to almost any furnish*
(4) **Ease of mixing**—*without acid, aging, or special equipment*
(5) **Convenient pH control**—*with acid, alum, or blends of acid and alum*
(6) **Wide flexibility**—*in point of addition*
(7) **Excellent stability**—*for at least 6 months*
(8) **Available**—*in tank car quantities*

For better wet strength paper, write for your sample of UFORMITE 700 and technical literature. For detailed recommendations tell us about your specific problem.

OTHER DEPENDABLE WET-STRENGTH RESINS

Rohm & Haas makes a complete range of dependable wet-strength resins:—UFORMITE 467, liquid anionic type for efficient, low-cost wet strength, particularly suitable for beater addition—UFORMITE 520, powdered anionic type corresponding to UFORMITE 467—and UFORMITE 471, liquid cationic type, suitable for all furnishes, any addition point. We'll be glad to mail you literature on these UFORMITE resins, also.

UFORMITE is a trade mark, Reg. U.S. Pat. Off. and in principal foreign countries.

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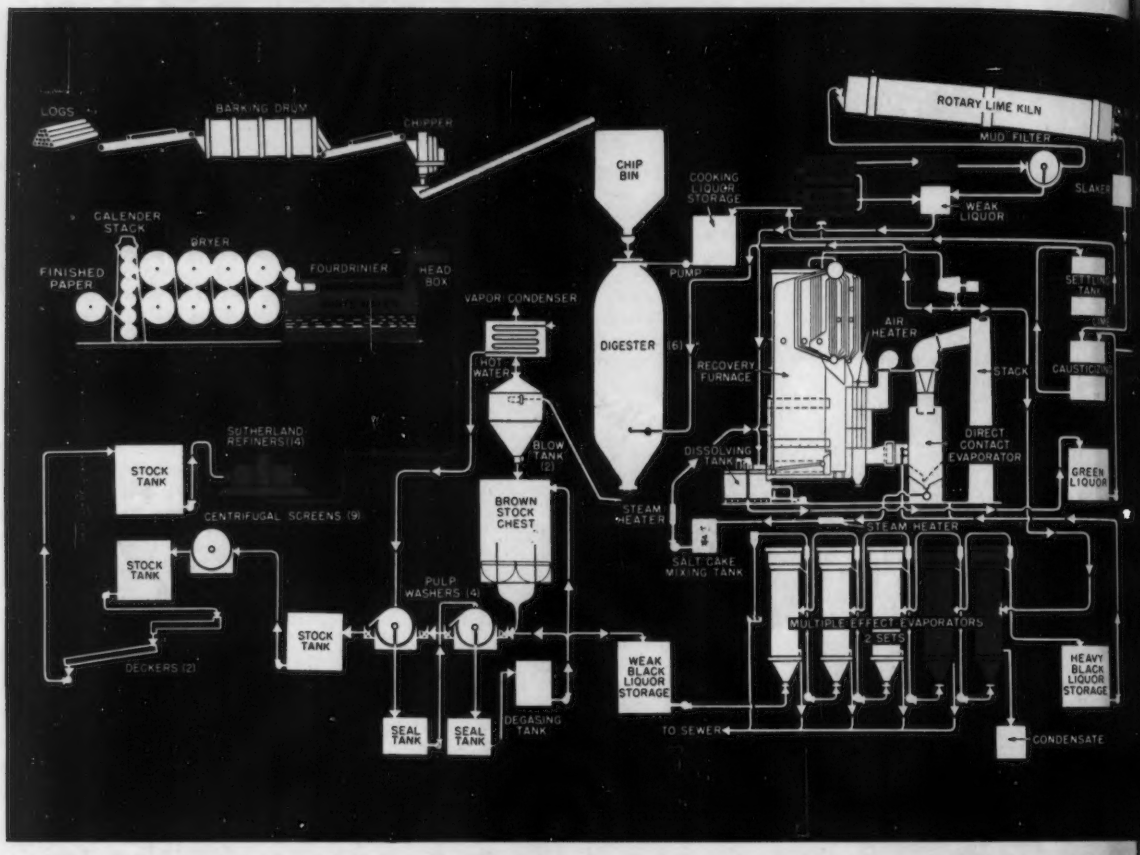
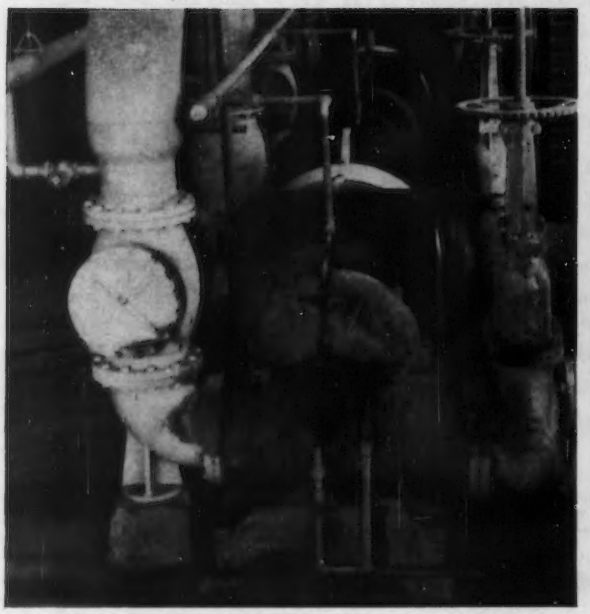
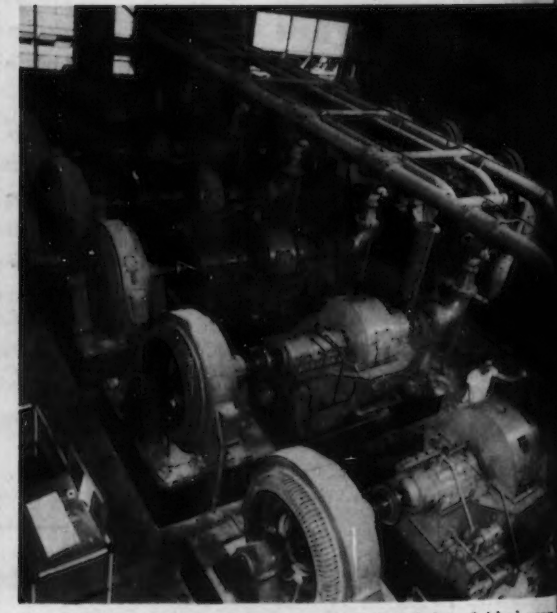
How MACON KRAFT COMPANY





EIGHT WORTHINGTON PUMPS with Stainless Steel impellers, wearing rings and shaft sleeves are used to circulate black liquor in a counterflow system from the last washing stage back to the first.



ALL-STAINLESS Sutherland refiners turn deckered stock into finished paper pulp at Macon Kraft. Seven of the refiners are shown here, with another battery of seven behind the piping.

uses Stainless Steel

to serve the world's longest paper machine

● At the time of its installation in 1948, the 540-foot-long Beloit Fourdrinier machine at Macon Kraft Company, Macon, Ga., assumed the title of "world's longest paper machine." It turns out an average of 680 tons per day of 38-to-69 pound container board with a trimmed paper width of 198 inches.

The machine itself makes liberal use of the benefits of Stainless Steel and so does the other mill equipment that serves it. A glance at the flow chart on the opposite page, with Stainless equipment indicated in red, shows how vital this material is to Macon Kraft's operation.

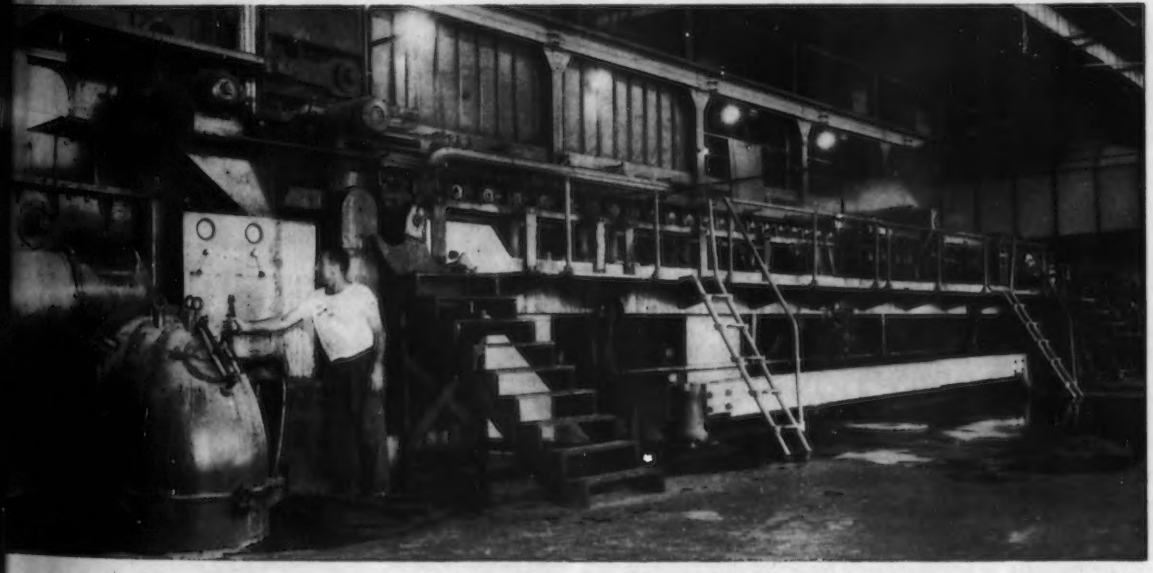
On the Beloit machine, the headbox is lined with Stainless Steel. The entire side frame structural members, wire changing rails, save-all pan and downlegs to white water pit are Stainless, too. Stainless deflector bars between table rolls throw off water into the Stainless save-all pans. Separator boxes are being switched to Stainless as replacements are made.

In stock preparation, 14 Stainless Sutherland refiners, with Stainless discs, turn deckered stock into finished pulp. Maintenance consists of regrooving the discs every six months.

On the liquor recovery side are two sets of six-effect evaporators with each of the first two effects in both sets made up of 504 Stainless tubes. Macon Kraft also uses Stainless extensively in pipe, valves, pumps and tanks.

Every mill has its "trouble-spots" where the durability and corrosion-resistance of Stainless Steel are vital to production. Use Stainless wherever you need it and, for finest performance, make sure you get perfected, service-tested U·S·S Stainless Steel.

WET END of Macon Kraft's 540-foot-long Beloit Fourdrinier machine. Side frame structural members, wire-changing rails, save-all pan and downlegs to white water pit are all Stainless Steel.



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U·S·S STAINLESS STEEL

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UNITED STATES STEEL

New Equipment
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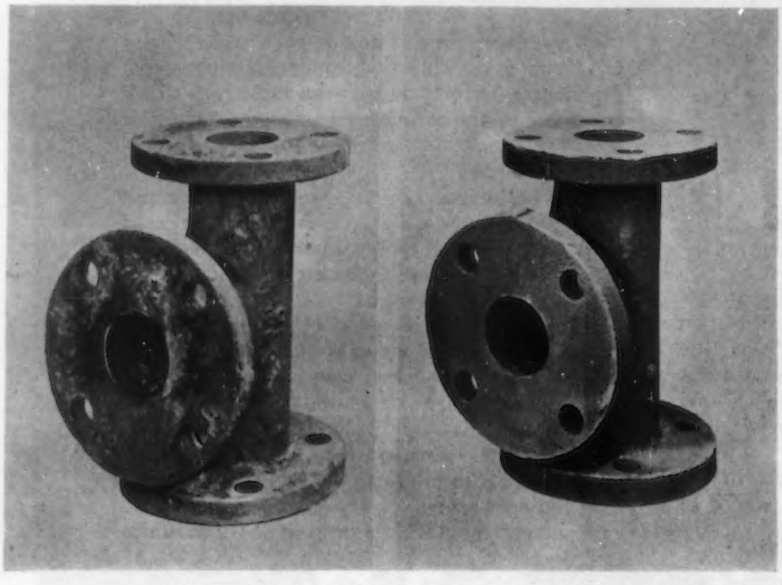


Pipe tee shows before (left) and after (right) Rustcleaning.

Rust Remover

A new chemical treatment that removes rust, tarnish and light oil, chemically prepares metals for paint, and retards corrosion, is announced by Octagon Process, Inc., 15 Bank St., Staten Island 1, N. Y.

Known as Rustclean, the new compound destroys rust and rust-promoting surface contaminants, thereby retarding corrosion. Rustclean not only chemically cleans the surface of steel, iron, aluminum, zinc and cadmium, it also forms a phosphate coating which acts as a base for organic finishes. Rustclean is also an effective tarnish remover for copper and its alloys.

The two standard types are Rustclean 12 and Rustclean 15: 12, designed for a wipe-on process for large parts or in plants whose equipment or production is limited; and 15, a more concentrated compound which is used in an immersion process in a stainless steel vessel (recommended for use at elevated temperatures) or tank lined with rubber, polyethylene or asphalt. It is most effective when used at a temperature above 160°F.

For close tolerance work, Rustclean is marketed in special grades. These inhibited types will remove rust without any attack on the steel, and will prevent hydrogen embrittlement. Inhibited Rustcleans are particularly valuable for treating precision parts, such as gauges, instruments and interlocking units.

The Technical Service Dept. of Octagon Process, Inc., will furnish detailed process specifications for each type of Rustclean. Inquiries should include a description of the specific problem, as well as type of metal to be cleaned and treated.

Chrome Care

A new product for industrial use to protect bright parts and keep them gleaming has been developed and marketed by the Cannon Chemical Co., 181 Portland St., Cambridge 41, Mass.

An entirely new type of silicone emulsion, Lecton Chrome-Care is simply applied to the surface to be treated and wiped dry with a clean cloth. When used frequently, it retards rust and corrosion, removes normal amounts of oil and grease, and keeps industrial equipment clean, new and shining, the manufacturer claims. The product leaves an invisible protective film which does not crack, chip, peel or scratch; cannot wear off when subjected to salts, solvents, or atmospheric conditions, and permits the surface of the treated piece to be renewed without discoloration or deterioration, it is stated. Samples are available to any industry interested.

Small Chip Screen

To meet the need of a small capacity chip screen to operate in conjunction with waste wood chippers in sawmills, a compact vibrating chip screen has been constructed by Canadian Sumner Iron Works, Ltd., Vancouver, B. C.

Of the three-deck type, this chip screen is suspended by four cables anchored in heavy spring mounts. Screen is 12 feet long and 51 inches wide, and is designed to screen 12 units per hour or 15 units per hour with a chip spreader installed. The screen design could be increased to suit any special installation.

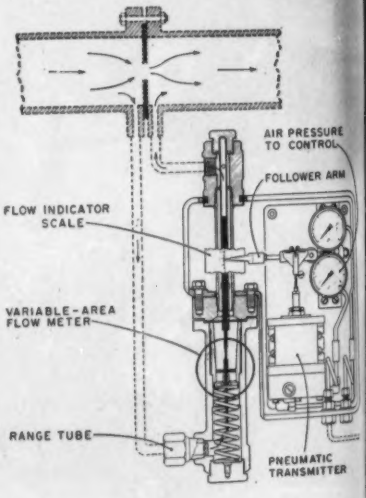
The vibration unit, fitted with cut steel gears, assembled in an oil-tight dust-proof cast steel housing, is operated by a 10 hp. electric motor with V-belt drive.

The first screen, delivered several months ago, is said to be giving entire satisfaction at Western Forest Industries Ltd., Honeymoon Bay, Vancouver Island. Chips at this sawmill are produced from mill waste with a Sumner 54-inch, eight-knife chipper and are delivered by truck and trailer to the MacMillan pulpmill at Marmac, B. C.

V/A Cell For Office Metering

With a new product, known as the V/A Cell, the Fischer & Porter Co., Hatboro, Pa., introduces an entirely new approach to orifice metering. Instead of measuring the static-pressure differential across the orifice as do conventional mercury manometers, the unit meters a continuous by-pass stream around that orifice.

In the pulp and paper industry, its characteristics of kinetic action, linearity, rangeability, flexibility and pneumatic transmission offer improvement in air, water, steam and thin liquor metering, it is stated. Lead-line clogging is reduced and the need for steam condensate pots eliminated. The wide



rangeability inherent in the new method and the flexibility provided by simple replacement of the by-pass restriction (the range tube) offers new versatility in instrumentation. Further, the compactness of the unit, the point-of-measurement flow-indicator and the pneumatic activation of devises at remote points and panels permits greater freedom in piping and plant layout.

GIANTS

RUGGED
EFFECTIVE
POWERFUL

LOBDELL TYPE CW 48" ROLL GRINDER

FREE—ask for your copy of our useful Paper Mill Roll Grinder Catalog, today.

Rugged, extremely accurate, with ease and flexibility of operation... these giant LOBDELL Type CW Roll Grinders, are a fitting supplement to the giant paper machines of today. The huge rolls of today's machines are within the medium range, rather than close to the top limit of this big Grinder's capacity. Accuracies of .0005" on the diameter of a press roll with a rubber cover hard enough to measure accurately *are usual*... accuracies of .00025" and closer are obtained on straight or crowned rolls of chilled iron. Made in two sizes with capacities of 48" and 60" diameter and with bed length to suit the length of roll face... these Grinders are designed for Direct Current operation, but for connection to an A.C. power supply. Other Lobdell Grinders, Type GHV for A.C. operation are made in three smaller sizes to suit the requirements of any mill.

1836 **LOBDELL UNITED COMPANY** 1952

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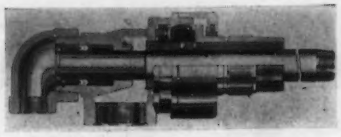
A SUBSIDIARY OF UNITED ENGINEERING AND FOUNDRY COMPANY

The principal parts of the V/A Cell are: a variable-area meter whose float position inside a tapered tube changes with flow; a balanced follower arm, magnetically linked to the float; and a pneumatic unit for transmitting flow-rate measurement to remotely-located recorders, indicators, totalizers, ratio controllers or other receiving instruments.

To satisfy wide metering requirements, the V/A Cell is manufactured in two models: one with working pressure rating of 1040 p.s.i. at 350° F. or 1200 p.s.i. at 100°F.; the other rated at 2600 p.s.i. at 350°F. or 3000 p.s.i. at 100°F. All floates, float chambers and range tubes are inspected for performances and dimension.

Revolving Joint

Rotherm Engineering Co., Inc., 4911 West Irving Park Rd., Chicago 41, Ill., announces a new revolving joint



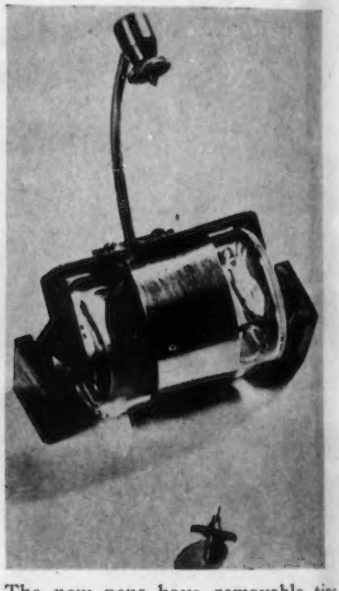
which compensates for all roll misalignment, requires no lubrication, can be mounted with solid piping for use on steam, and by changing the rotor and nut, it can be used with flexible hose if necessary.

Rotation takes place on the flat face of a non-porous carbon disc, the opposite side of which is a ball seat. This design permits the rotor to find its own rotating center, and to compensate for all piping misalignment. Because of its ball shape, the carbon will not break if subjected to pressure or shock. Inside of the casing is sealed by a spring-seated Teflon wedge seal, which acts as an expansion joint as well as taking care of all roll-end play. Teflon is rated as capable of handling temperatures from —100° to +500° continuously, and to be resistant to all known acids.

Rotherm joints are capable of handling pressures to 300 pounds steam, air, oil, gas and other fluids and are manufactured in sizes from ½" to 3" inclusive, and can be had with both the stationary and rotating syphon.

Removable Tip Pen

Industrial instrument pens designed to eliminate flooding and reduce paper plugging and choking are announced by Minneapolis-Honeywell Regulator Co., Brown Instruments Div., Wayne & Windrim Ave., Philadelphia 44, Pa., for their strip chart electronic instruments.



The new pens have removable tips of platinum alloy and a new reservoir construction which eliminates flooding because the effective ink level is always below the writing tip.

Among other advantages claimed are: the pen operates with decreased pressure on the instrument chart, tending to reduce paper fiber choking; thorough cleaning is made easy by a simple disassembly, and the new design fits on standard pen carriages, permitting improved performance for already installed instruments.

Super Cutter

Downingtown Mfg. Co., Downingtown, Pa., has just announced a new cutter being manufactured in the U. S. for the first time.

A development of the Masson-Scott Cutter and Layboy manufactured in Great Britain for a number of years, the machine is described as a high-speed precision sheet-cutting machine capable of an unusually high rate of production while maintaining a degree of accuracy not previously associated with rotary sheeting equipment.

The layboy lifts as the height of the pile increases. Operation is hydraulic and automatic according to the speed and number of sheets per minute. When the stack reaches a maximum height, the cutter stops automatically and the layboy is lifted clear of the stack by push button. The stack can then be removed by a fork-truck from the front or from either side. When a new skid is placed, the layboy carriage is dropped to starting position by simply opening a valve.

Important detail features are designed to pile exceptionally neat stacks of paper, first essential of which is accuracy of cutter with respect to length. Delivery end of the layboy is equipped with a final delivery roll driven at a minimum speed commensurate with good laying. A motor-driven centrifugal fan provides a stream of air between the sheets as they are delivered to the stack, the volume of air being controlled by a hand-operated valve. Layboy is also equipped with a stack equalizer by which the top level of the stacks of two different sheet sizes are automatically maintained at equal level. This equipment comprises a frame on which the mill skids of the long sheet are supported instead of resting on floor. As stacks build up, the skids supporting the long sheet are lifted hydraulically on the frame. The frame sinks into a channel in the floor allowing the skids to rest on the floor where they are picked up by a fork truck in the usual manner.

Line Type Purifier Features Low Cost

A low-cost line type purifier, Type LC Hi-eF, has been announced by the V. D. Anderson Co., 1935 West 96th St., Cleveland 2, Ohio, for smaller pipelines from ½" to 2". According to the manufacturer, the low price permits purifiers to be used for the first time for many installations formerly considered uneconomical.

The Purifier removes entrainment by means of an improved centrifugal element within the unit which engages and imparts a rapid rotational motion

PUTTING IT ON THE LINE...

in Industry after Industry!

The Grinnell-Saunders Diaphragm Valve . . . . . .

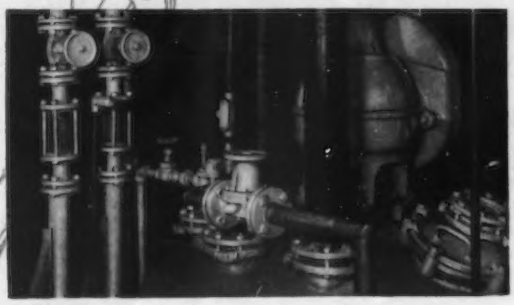
Here's why . . . Piping in today's complex industrial plants is an exacting science involving the handling of highly corrosive fluids, gases, compressed air, beverages, foods and suspended solids . . . in lines where corrosion, abrasion, contamination, clogging, leakage and maintenance are costly factors. Under such conditions, the amazing adaptability of the Grinnell-Saunders Diaphragm Valve explains its acceptance by industry after industry.

Bodies of this versatile valve are made in a variety of metals — iron, stainless steel, bronze, aluminum and others. *But of more importance* is the fact that a body of cast iron (a metal not in short supply) can be lined with glass, lead, natural rubber, neoprene and other materials which, in many instances, handle corrosive fluids *better* than metals.

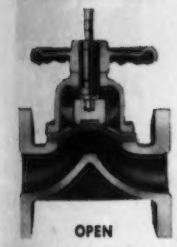
Diaphragms come in natural rubber, neoprene, butyl, hycar, a special synthetic for foods, and KEL-F. This last is chemically inert to all acids and alkalies in all concentrations with the exception of molten alkali metals.

From this broad selection of materials, the problems which the Grinnell-Saunders valve can solve are extremely varied. No wonder industry after industry is putting it on the line.

PULP AND PAPER MILL. Rubber-lined Grinnell-Saunders Valves on stainless steel piping handle sulphate pulp stock in bleach plant of Potlatch Forests, Inc., Lewiston, Idaho.

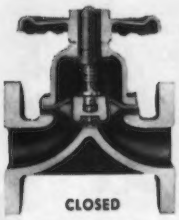


CHEMICAL PLANTS. Glass-lined Grinnell-Saunders Diaphragm Valves, with KEL-F diaphragms, handle chlorinated organic chemicals at Hooker Electrochemical Company, Niagara Falls, N. Y.



OPEN

Showing rising spindle . . . valves are available with rising or stationary spindle.

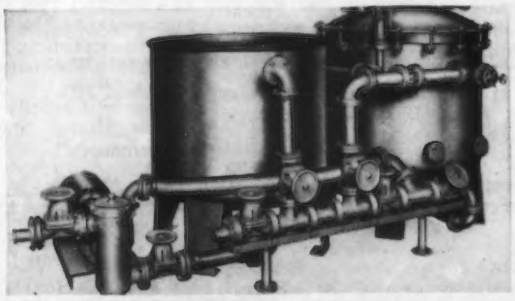


CLOSED

KEL-F diaphragm, using special rubber backing cushion and floating tube nut design.

CHECK THESE GRINNELL-SAUNDERS FEATURES...

- Diaphragm absolutely isolates working parts from the fluid.
- Diaphragm lifts high for streamline flow in either direction.
- Diaphragm presses tight for positive closure.
- Body, lining and diaphragm materials to suit service.
- Simple maintenance — diaphragm easily replaced.



EQUIPMENT MANUFACTURERS. Grinnell-Saunders valves with rubber linings are standard on filtration equipment for solution clarification, made by Industrial Filter & Pump Mfg. Co., Chicago, Ill.

GRINNELL

WHENEVER PIPING IS INVOLVED

Grinnell Company Inc., Providence, Rhode Island • Sales Offices and Warehouses in Principal Cities

pipe and tube fittings • welding fittings • engineered pipe hangers and supports • Thermolier unit heaters • valves
Grinnell-Saunders diaphragm valves • pipe • prefabricated piping • plumbing and heating specialties • water works supplies
industrial supplies • Grinnell automatic sprinkler fire protection systems • Amco air conditioning systems

to entrainment-laden vapor, throwing the solids and water outward to the walls of the Purifier. Each unit is warranted to remove more than 99 percent of the entrainment.

Type LC Hi-eF is installed like a valve of steam trap and is compact. The 2" size is only 5" in diameter and 17" long. Other features claimed are:

no moving parts; eliminating maintenance; minimum pressure drop through the unit; lightweight construction and large entrainment capacity. Designed for steam applications up to 400 p.s.i.g. and 500°F., the body is forged steel with stainless centrifugal elements. For Bulletin 500, address inquiries to William J. Gleason, manager, Purifier Div., V. D. Anderson Co.

NEW LITERATURE

Allis-Chalmers Mfg. Co., 994 S. 70th St., Milwaukee, Wis. Bulletin No. 54, "Alkalinity-Reducing Ion Exchanger." Technical and sales copy with illustrations.

Charles Bruning Co., Inc., Teterboro, N. J. Booklet A-2008, "The Copyflex Process." Describes the Bruning Copyflex process as a method of reproduction for quickly making low-cost diazotype copies.

Becco Sales Corp., Station B, Buffalo 7, N. Y. Bulletin No. 34, "Uses of Persulfates—A Bibliography." Features "Cellulose Chemistry": The Action of Ammonium Persulfate on Cellulose; The Action of Ammonium Persulfate Solution on Cellulose; Bleaching Pulp; Bleaching Cellulosic Materials.

Chemonomics, Inc., 400 Madison Ave., New York 17, N. Y. Book, "Communication of Technical Information." Views the art of communication as the nerve system of an organization, with the technical man as an integral part. Deals with inter-organization memos, progress statements, and oral presentation in conferences. 116 pp.

Cleaver-Brooks Co., 326 E. Keefe Ave., Milwaukee 12, Wis. Catalog, "Cleaver-Brooks Hev-E-Oil Burners for Commercial and Industrial Use." Describing complete line of Hev-E-Oil Burners. Contains illustrations of the various sizes and capacities of the burners—including burners with maximum capacities of five to 60 gallons.

Graton & Knight Co., Worcester, Mass. Catalog and Application Manual No. 101, "Leather Belting for More Production-Power." Reference for the selection and application of power transmission belting.

International Documents Service, Columbia University Press, 2960 Broadway, New York 27, N. Y. Booklet, "Unasylva." An international review of forestry and forest products. Includes: "Pulpwood From Tropical Forests," by Dr. Robert W. Hess; "Loblolly Pine; Maintaining This Species as a Sub-Climax in the Southeastern U. S.," by Thomas Lotti and R. D. McCulley.

Island Equipment Corp., 27-10 Bridge Plaza North, Long Island City 1, N. Y. Brochure, "Island Conveying Equipment." Provides detailed data concerning Island equipment: Ultimate, Styl-O-Matic and Styl-O-Veyor conveyor systems. An elaborate and complete presentation with cuts, assembly charts, scales, and engineering data.

Merritt-Chapman & Scott Corp., 17 Battery Pl., New York 4, N. Y. Magazine, "Black Horse News," a new company magazine to be distributed monthly. Features articles covering the company's various spheres of work in the fields of marine, heavy, industrial and building construction, marine salvage and derrick heavy hoisting. Lead article in the first issue discusses the growth of the paper industry in the South, and outlines the important part that M-C&S has played in this growth.

National Planning Assn., 800 21st St., N.W., Washington 6, D.C. Pamphlet No. 78, "An Agriculture Committee Report." Featuring: Land Reform in Asia, a case study by C. Clyde Mitchell.

Newsprint Association of Canada, Sun Life Building, Montreal, Canada. Booklet, "Newsprint Comments February 1952." Material compiled by Newsprint Assn. of Canada for presentation to the Board of Directors of American Newspaper Publishers Assn. at a meeting with Canadian newsprint representatives to discuss supply and demand statistics; Windsor Hotel, Montreal; February 7-8, 1952. Contains a "Report on Potential Canadian Newsprint Capacity to 1960 Requested by the United States and Canadian Governments."

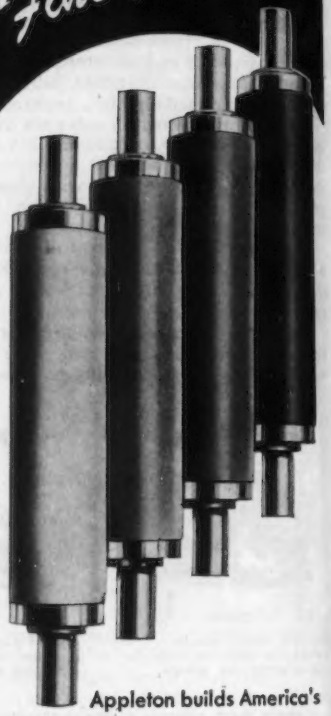
The Rapids-Standard Co., Inc., Grand Rapids 2, Mich. Specifications and data bulletin No. TV-52, "Rapistan Table-Veyor Horizontal Belt Conveyor." Illustrated.

Rhom & Haas Co., The Resinous Products Div., Washington Sq., Philadelphia 5, Pa. Bulletins, "Resin Review." A new publication which aims to inform industrial users of the synthetic resins about product improvements, better formulations, and economies in manufacturing or processing being achieved with these chemicals.

(Continued on page 44)

APPLETON SUPER-CALENDER ROLLS...

First Choice for Fine Finishes!



Appleton builds America's finest finishing rolls — available in a complete range of sizes and fillings to meet every finishing requirement.

THE APPLETON MACHINE CO.
APPLETON, WISCONSIN

Eastern Sales Representatives
CASTLE & OVERTON, INC.
630 Fifth Avenue, New York

Western Sales Representatives
PACIFIC COAST SUPPLY CO.
San Francisco • Portland

America's Finest Family Circle

The family circle formed by *Appleton Machine Company Products* has the well-earned title of "America's Finest." Since 1883, *Appleton Machines* have given superior service to the pulp and paper industry everywhere. Write today for complete information on *Appleton Machine Company Products.*

Sales Representatives
Castle and Overton, Inc., 630 Fifth Avenue
New York

APPLETON MACHINE COMPANY
APPLETON WISCONSIN

CUSTOM-BUILDERS OF PULP & PAPER MILL MACHINES • WINDERS •
ROBERTS GRINDERS • FINISHING ROLLS • REWINDERS

PRICES

The prices below reflect market quotations in New York at the mill level on standard grades. Does not include spot offerings.

PAPER AND BOARD

Standard News, Delivered Ports

Rolls, contract, per ton	$114.00/116.00
Sheets	130.00/ —

Kraft—per cwt. 50# base wgt. OPS Ceiling CPR 88

F.o.b. Southern & Western integrated mills. C.l. Freight allowed up to $10 a ton.

Standard Wrapping, ctr. rolls	$7.75/ —
Butchers, counter rolls	8.25/ —
Standard Bag, mill rolls	7.50/ —
Shipping Sack, mill rolls	7.75/ —
Gumming, mill rolls	8.00/ —
Asphalting, mill rolls	7.75/ —
Envelope, Sub. 20, mill rolls	9.25/ —

Tissues— per ream 24x36 (480) 10 lbs. 2500 lbs or more

Wh. No. 1 Frd.	$2.25/ —
Wh. No. 1 MG	2.25/ —
Wh. No. 1½	1.90/ 2.00
Wh. No. 2	1.65/ 1.80
Kraft Anti-Tar 20-30	1.90/ 1.95
White Anti-Tar 20x30	2.20 / —

Toilet— per case of 100 rolls—1M sheets

Unbleached 4½x4½	$8.00/$8.25
Unbleached 4½x5, 650 sheets	6.65/ —
Bleached 4½x4½	10.00/12.50
Bleached 4½x5	9.96/ —
Per Case of 50 rolls—2000 sheets	
Unbleached 4½x4½	$8.00/$9.75
Bleached 4½x4½	6.95/ —
Per Case of 100 rolls—1000 sheets	
Facial, 4½x4½, 2-ply	$8.95/10.37
4½x5, 2-ply	10.25/10.75

Paper Towels— per case of 3750

Wh. Jr. M'tif'd 9⅛x9½	$6.40
Br. Sr. M'tif'd 9¾x12	4.40
Br. Jr. M'tif'd 9½x9¾	3.90
Br. Jr. Sgl. fold 9⅞x10¾	3.95
C-Fold 10½ min. x 14 max.	5.90/ 6.64
Blchd. 7½x11, 48/50 rolls	6.80/ 7.92

Manila, per cwt.

No. 1 Jute Tag, 100-lb., sheets	$20.55/22.55
Reg. Jute M.F. 40-lb., sheets	19.50/21.50
Printing Manila	12.00/ —

Gummed Tape— per bdl., 500 bdls. or more

90-lb. 375 ft. GSI	$7.20 / —
60-lb. 600 ft. GSI	7.20 / —
35-lb. 800 ft. GSI	8.28 / —
35-lb. 500 ft. GSO	6.21 / —

MARKET WOOD PULP

First Quarter Contract Prices. Per Short Air-Dry Ton

	Varying freight allowances		On Dock Atlantic Ports		
	*U. S.	Canadian	*Swedish	*Finnish	*Norwegian
Groundwood	$92.50/ —	‡$95.00/100.00			
Sulfate, Bleached	145.90/ —	190.00/200.00	$230.00/ —	$230.00/ —	$230.00/ —
Semi-bleached Sulfate	140.00/ —				
Sulfate, Unbl.	132.50/ —	145.00/175.00	200.00/ —	200.00/ —	
Sulfite, Blchd.	140.00/ —	160.00/175.00	225.00/ —	225.00/ —	225.00/ —
Sulfite, Unblchd.	132.50/ —	150.00/160.00	200.00/ —	200.00/ —	
Sulfite, Unbl'd (Glassine)		164.00/ —			
Soda, Blchd.	140.00/ —	155.00/160.00			
Sulfite Screenings	72.50/ —				
Sulfate Screenings	67.50/ —				
Groundwod Screenings	60.00/ —				
Unblchd Sulfate Sideruns	132.50/ —				
Stand. News. Sideruns	92.50/ —	106.00 —			

* OPS Ceiling, CPR 49 ‡ F.o.b. Shipping Point.

Boards Delivered plant, per ton ..... CPR 108

Filled News	$110.00/ —
Plain Chip	105.00/ —
Blchd. Mla. L-d. Chip	150.00/ —
White Pat. coated .020	175.00/ —
Kr. Liner 42 lb. M sq. ft. $2.47	117.50/ —
Kr. Corr. .009 M sq. ft. $1.59	122.50/ —
Binders Boards	137.50/140.00

The following prices are representative distributors' resale prices:

Rag Content Bonds and Ledgers— White, 20 lb.

Bonds	4 Ctns.
	per cwt.
100% Rag Ex. No. 1	$70.45/$75.90
100% Rag	62.65/ —
75% Rag	48.15/ —
50% Rag	38.90/ —
25% Rag	31.65/ 33.00

Ledgers	4 Ctns.
	per cwt.
100% Rag Ex. No. 1	$72.65/$72.80
100% Rag	63.90/ —
75% Rag	49.40/ —
50% Rag	40.20/ —
25% Rag	33.00/ 34.30

Sulphite Bonds and Ledgers White, 20 lb.

Bonds	4 Ctns.
	per cwt.
Watermarked	$19.00/$20.50
Plain	18.40/ 19.50

Ledgers	4 Ctns.
	per cwt.
Watermarked	$20.30/$21.80
Plain	19.35/ 20.80

White Book

Conversion Coated	Case
	per cwt.
No. 1 ‡	$23.90/$24.65
No. 2 ‡	22.40/ 22.85
No. 3 ‡	22.05/ —
Machine Coated	
No. 1 ‡	$19.15/$19.65
No. 2 ‡	16.65/ 17.40
Uncoated	
No. 1 Antique (Watermarked) ‡	$19.15/$19.65
Offset ‡	18.15/ 19.15
A Grade E. F. ‡	18.40/ 18.65
A Grade S. C. ‡	18.90/ 19.15
B Grade E. F. ‡	17.40/ 18.15
B Grade S. C. ‡	17.90/ 18.65

‡ Indicates a price change.

WASTE PAPER MARKET

Prices to mills, per ton, f.o.b. cars shipping point (includes brokers' fee.) These quotations are a partial indication of the price range in each market on the date specified, as gathered from major dealers. ALL PRICES ARE STRICTLY NOMINAL.

	New York March 11	Philadelphia March 5	Boston March 11	Chicago March 11
No. 1 Mixed Paper	nominal	$7.00/ 10.00	$7.00/ —	$8.00/ —
No. 1 News	$10.00/ 12.00	9.00/ 11.00	— / 9.00	15.00/ —
Over-issue News	15.00/ 18.00	13.00/ 15.00	15.00/ 22.00	18.00/ —
Mill Wrappers	8.00/ 12.00	7.00/ 12.00	13.00/ 19.00	11.00/ —
Corrugated Containers	12.00/ 13.00	10.00/ 12.00	13.00/ —	15.00/ —
Double Kraft Ld. Corr. Cuts	40.00/ 58.00	35.00/ 50.00	40.00/ 58.00	50.00/ 58.00
100% Kraft Corr. Cuts	70.00/ 80.00	75.00/ 90.00	75.00/ 80.00	75.00/ —
Used Sugar & Flour Bags	45.00/ 50.00	35.00/ 45.00	45.00/ 50.00	40.00/ —
Super Resorted Br. Kraft	45.00/ 60.00	40.00/ 50.00	45.00/ 60.00	40.00/ —
New Br. Kraft Env. Cuts	90.00/100.00	90.00/105.00	95.00/100.00	90.00/ —
New Br. Kraft Cuts	80.00/ 90.00	80.00/ 95.00	85.00/105.00	80.00/ —
No. 1 Gdwd Shvs.	25.00/ 35.00	25.00/ 35.00	28.00/ 35.00	25.00/ —
White Newsblanks	55.00/ 60.00	70.00/ 75.00	55.00/ 75.00	45.00/ —
No. 1 Flyleaf Shvs.	40.00/ 55.00	40.00/ 50.00	45.00/ 70.00	50.00/ —
No. 1 Soft Wht. Shvs.	120.00/130.00	95.00/125.00	120.00/130.00	115.00/ —
Super Soft Wht. Shvs.	140.00/150.00	130.00/140.00	135.00/150.00	125.00/ —
Hd. Wht. Shvs.	140.00/150.00	135.00/150.00	145.00/165.00	130.00/ —
Hd. Wht. Env. Cuts	155.00/165.00	155.00/170.00	160.00/170.00	140.00/ —
New Manila Env. Cuts	100.00/105.00	95.00/115.00	100.00/110.00	55.00/ —
Col. Tab Cards	70.00/ 80.00	65.00/ 75.00	65.00/ 75.00	55.00/ —
Manila Tab Cards	110.00/120.00	100.00/120.00	110.00/120.00	90.00/ —
No. 1 Mixed Ledger	50.00/ 60.00	55.00/ 65.00	60.00/ 70.00	55.00/ —
White Ledger	80.00/ 85.00	85.00/ 90.00	85.00/ 95.00	70.00/ —
No. 1 Book & Mag.†	28.00/ —	18.00/ 22.00	28.00/ 32.00	20.00/ —
No. 1 Rep'd. Hvy. Books‡	40.00/ 45.00	27.00/ 32.00	40.00/ 55.00	35.00/ —

† Includes Time & Life; no coarse groundwood. ‡ Not to exceed 10% groundwood. ‖ Deld.

RAG MARKET

New Domestic Cotton Cuttings
OPS Ceiling Price, CPR 28 *
Delivered Mill Basis

No. 1 White Shirts	$20.00/$21.00*
No. 1 Unblchd. Muslins	20.50/ 21.00*
Blchd. & Unblchd. Underwears	— / 21.00*
Blchd. Canton Flannels	— / 21.00*
No. 1 Light Silesias	15.50/ 16.00*
No. 1 Light Prints	10.50/ 11.50*
No. 1 Blue Overalls	14.00/ 14.50*
Suntan Khakis	— / 11.50*

Add 10% Dealer Commission*

Fancy Shirts	$10.00
Indigo Blues	10.00
Mixed Khakis	8.00
Corduroys	8.00
Cottonades	8.00
No. 1 Washables	6.50

Old Domestic Cotton Rags
(Prices to Dealers, f.o.b. Ship. Pt.)

	Per 100 lbs.
Mixed White	$6.00/$6.50
Cotton Pants & Overalls	5.25/ 5.50
Thirds and Blues, Repacked	4.25/ 4.75
No. 1 Roofing Rags	1.20/ 1.25
No. 2 Roofing Rags	1.00/ 1.10
No. 3 & 4 Roofing Rags	.90/ 1.00

Bagging
(Prices to Dealers, f.o.b. N. Y.)
PRICES NOMINAL

	Per 100 lbs
Foreign Gunny	$5.50/$6.25
Domestic Gunny, No. 1	5.50/ 6.25
Heavy Wool Tares	5.50/ 6.00
Foreign Manila Rope	9.00/ 9.25
Domestic Manila Rope	9.00/ 9.25
Jute Strings	6.50/ 7.00
No. 1 Sisal Strings	8.00/ 8.50
Paper Mill Tares	5.50/ 5.75
Foreign Scrap Burlap	5.25/ 6.00
Domestic Scrap Burlap	5.50/ 6.00
Austr. Wool Pouches	7.50/ 8.00
New Burlap Cuttings	7.00/ 7.50

"I urge every American employer to promote the Payroll Savings Plan..."

DECHARD A. HULCY, PRESIDENT
Chamber of Commerce of the United States

"I urge every American employer to promote the Payroll Savings Plan among his employees as a means of building a reservoir of savings."

As President of the Chamber of Commerce of the United States... with literally thousands of contacts throughout industry and commerce... Mr. Hulcy is uniquely qualified to evaluate the Payroll Savings Plan.

As a business man, Mr. Hulcy puts his finger on a most important accomplishment of the Payroll Savings Plan: the enormous reservoir of savings, *future purchasing power*, built up by systematic saving.

Today, millions of Americans hold Series E Defense Bonds totaling $34.7 Billion. It will surprise many to learn that this figure is $4.8 Billion greater than on V.J. Day. And the $34.7 Billion total of outstanding Defense Bonds is mounting as more and more employers recognize the importance of the Payroll Savings Plan. During 1951 there was a sizable increase in the number of men and women saving through Payroll Saving Plans where they work.

During the calendar year 1951, 45,500,000 $25 Series E Bonds were purchased — a gain of 17% over the previous year. 12,000,000 $50 E Bonds were purchased in the same period, 14% over the previous year. $25 and $50 denominations are the bonds bought by Payroll Savers.

Building a reservoir of savings and future purchasing power... contributing to America's defense effort... helping to maintain America's economic stability by providing a check on inflationary tendencies, the Payroll Savings Plan is doing a three-way job.

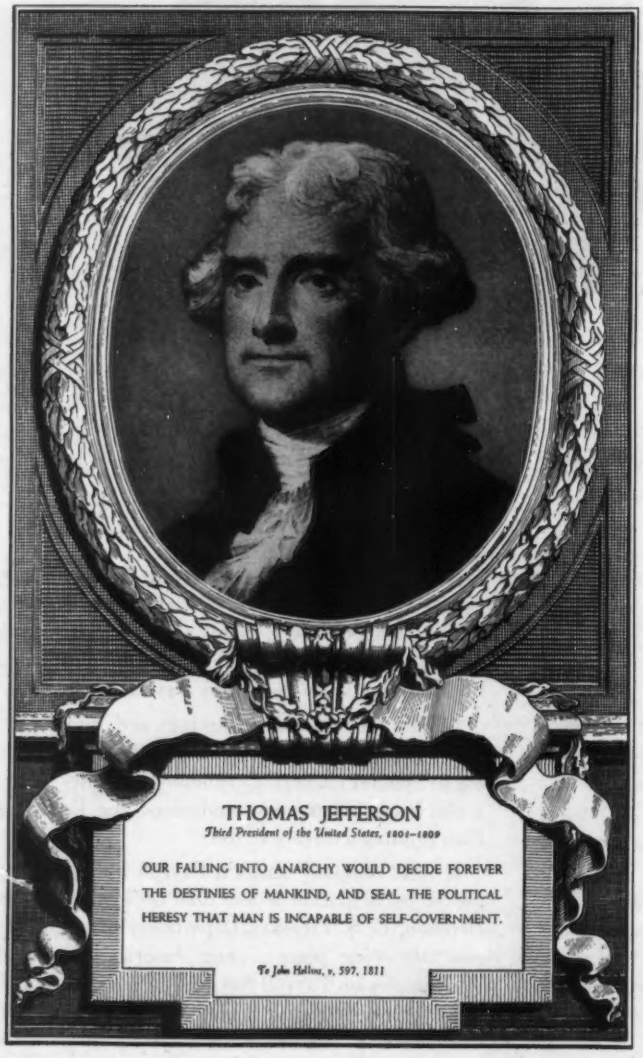
If your company hasn't a Payroll Plan, or if your employee participation is less than 60%, the Savings Bond Division, U. S. Treasury Department will be glad to help you take your place among America's Honor Roll of "Companies on Payroll Savings". Phone, wire or write to Suite 700, Washington Building, Washington, D. C.

The U.S. Government does not pay for this advertising. The Treasury Department thanks, for their patriotic donation, the Advertising Council and

PAPER TRADE JOURNAL

MATERIAL PRICES

Aluminum sulfate:		
coml. bags, wks.....cwt.	1.65	
iron-free, c.l.	3.25	
Alcohol, ethyl:		
tax free, dms. c.l.....gal.	1.01	/ 1.05½
deld. East Miss.		
Alcohol, methyl:		
Synthetic, Zone 1, dms. c.l. fit. alld.....gal.	.44	
Casein, acid prec.:		
dom. sh. pt. c.l. .....lb.	.27	/ .35
imp. ex. dock .....lb.	.19¼/	.25
Caustic soda:		
c.l. wks. solid, 76% cwt.....	3.35	
flak. & grd. 100-lb. drums...	3.75	
liquid 50% tanks....	2.55	
liquid 70% tanks....	2.65	
China clay:		
dom. air-float. c.l. wks. ton	10.00	
water-washed, lump, filler....	11.00	
coating	17.60	/30.50
imported, ex whse...short ton	15.20	/28.35
Chlorine:		
single-unit tanks, works..cwt.	2.70	
multi-unit .....cwt.	3.20	/ 4.40
Formaldehyde:		
USP, inh. dms, c.l. wks....lb.	.0625/	.0675
l.c.l., E. wks.....	.0675/	.0725
Fuel oil:		
Bunker C, No. 6 Cal. hvy. tanks, refinery .....bbl.	1.95	/ 2.15
light .....bbl.	2.00	/ 2.25
Hydrogen peroxide:		
USP, 35% cbys. E. of Miss. lb.	.23½/	.26½
Lime:		
hydrated, bags, wks. .....tons	13.50	
Rosin:		
B gum, drms, c.l. Savan..cwt.	7.00	/ 9.00*
K, M, N .....cwt.	7.60	/ 9.60*
FF, wood, do.....cwt.	6.80	/ 7.30*
* OPS Ceiling, CPR 52.		
Rosin size:		
70%, gum & pale grds, tank cars, south, sh. pt. .....cwt.	6.60	/ 6.70
Salt cake:		
dom. bulk, c.l. wks.....ton	17.00	
wks. frt. all.....ton	20.00	/22.00
Soda ash:		
light, 58%, bags, wks.....	1.50	
bulk .....cwt.	1.20	
Sodium silicate, 40°:		
turbid. c.l. wks.....cwt.	1.30	/
l.c.l. wks.	1.60	/ 1.85
Sodium peroxide:		
dms. c.l. E. of Miss.....lb.	.21	
l.c.l. do. .....lb.	.21½/	.22
Soybean, protein:		
chem. isol, wks, c.l., bags..lb. Cinn. and Chic.	.25	/ .29
Sulfuric acid:		
60° Be. cbys. c.l. wks.....cwt.	1.75	/ —
l.c.l. wks. .....cwt.	2.05	/ 2.85
Sulfur:		
crude, c.l. mines, contract, long ton	21.00	/22.00
f.o.b. vessels Gulf	22.50	/23.50
Sulfur dioxide:		
liquid, coml. cyl. wks.....lb.	.09	
multi-unit cars .....lb.	.0535	
Starches:		
pearl corn, bags, c.l. wks..cwt.	6.44	/ —
white dextrines, c.l. wks...cwt.	7.83	/ —
potato, Idaho, c.l. wks....cwt.	nominal	
potato, Maine, c.l. wks....cwt.	nominal	
tapioca, conv. dextrines...cwt.	7.25	/ 8.25
Talc:		
domestic, 50-lb. sacks, c.l. wks. .....ton	25.00	/30.00
Titanium dioxide:		
anastase, c.l. deld., bags...lb.	.21	/ .21½
l.c.l. deld. .....lb.	.22	/ .22½
rutile, c.l. deld.....lb.	.23	/ .23½
l.c.l. deld. .....lb.	.24	/ .24½


THOMAS JEFFERSON
Third President of the United States, 1801–1809
OUR FALLING INTO ANARCHY WOULD DECIDE FOREVER THE DESTINIES OF MANKIND, AND SEAL THE POLITICAL HERESY THAT MAN IS INCAPABLE OF SELF-GOVERNMENT.
To John Hollins, v. 597, 1811

HAVE FAITH IN AMERICAN PRINCIPLES

Draper Brothers Company

Canton, Massachusetts

WOOLEN MANUFACTURERS SINCE 1856

The DRAPER Belt

New Literature

(Continued from page 40)

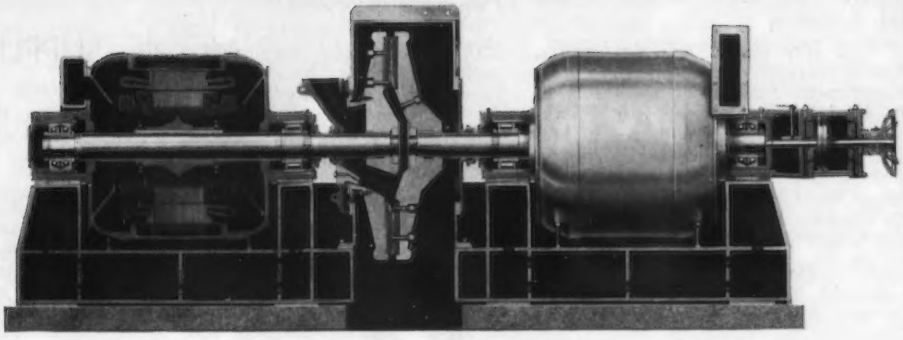
Stroh Process Steel Co., 1428 High St., Pittsburgh 12, Pa. Broadsides, with illustrations and data covering Stroh products; Wheels for Cranes and Industrial Cars; Special Spindles and Coupling Boxes; Spindles; Cast Steel "Wear-Proof" Gears; Advantages of Stroh Long and Short Addendum Cast Tooth Gearing; Racks and Pinions; Coupling Boxes and Flanged Crab Couplers; How the Stroh Process "Wear-Proofs" Stroh Products; Sprockets; Mill Pinions. . . . Bulletin, "Tire-Replacing Method."

Sulphite Pulp Manufacturers' Research League, Inc., 1101 East South River St., Appleton, Wis. Bulletin, "Report for 1951 to the Member Mills." A review of a decade's progress in research for the purpose of reducing stream pollution from spent sulfite liquor.

Sutherland Refiner Corp., Trenton 8, N. J. Booklet, "Modern Stock Preparation with Sutherland Continuous Beating Systems." Sales and technical copy.

Sylvania Electric Products, Inc., Lighting Division, 60 Boston St., Salem, Mass. Bulletin, "The Why,

for best fiberizing and dispersion



BAUER 40-IN. NO. 410 DOUBLE-DISK PULP REFINER

This is the largest double-disk pulp refiner now available. It is designed to use 600 hp effectively. Refining pressures and disk gap settings are regulated by finger-tip, pneumatic control. Disk adjustment is in increments of .001 in.

Bauer Pulp Refiners are used in pulp and paper mills throughout the world for fiberizing, dispersing, deflocking, and size reduction. Their preponderate usage is proof of the superior work they are doing.

To get complete information and data on the 400 series of Bauer Disk Refiners, ask for a copy of Bulletin P-2. A request for the bulletin will not expose you to a solicitation. However, if you desire information on your own specific problems, our sales engineer in your area will be glad to consult with you.

Write, wire, or phone.

272 BAUERS in use today on semi-chemical jobs alone

Four of the nine Bauer Refiners in a board mill where these machines do all the refining on semi-chemically cooked chips.

Bauer

THE BAUER BROS. CO.

1758 SHERIDAN AVE. • SPRINGFIELD, OHIO

When and How of Modern Lighting Maintenance."

Towmotor Corp., 1226 East 152nd St., Cleveland 10, Ohio. Bulletin, "Handling Materials Illustrated." . . . Also a safety kit which includes 4 new safety posters.

U. S. Department of Agriculture, Forest Service, Southeastern Forest Experiment Station, Asheville, N. C. Book, "Forest Statistics for Southwest Georgia, 1951," by James F. McCormack. This progress report presents area and timber volume statistics compiled from the resurveys for Southwest Georgia, designated as Survey Unit No. 2.

U. S. Department of Commerce, Office of Technical Services, Washington 25, D. C. "Bibliography of Technical Reports," Volume 9, April 2-June 25, 1948. The new index is the fourteenth to be issued by OTS. Volumes 8 and 16 still remain to be published. Check or money order payable to the Treasurer of the U. S. should accompany all orders.

U. S. Electric Motors, Inc., 200 E. Slauson Ave., Los Angeles 54, Calif. Bulletin, "Motor Backstops of Advanced Design." Sales and technical copy, illustrated.

Westinghouse Electric Supply Co., Box 25, Wall Street Station, New York 5, N. Y. Bulletin, "WESCO Reporter." Features: Life-Line Starters; ILG Ventilating Equipment.

Foster Wheeler Corp., 165 Broadway, New York 6, N. Y. Booklet, "Heat Engineering." Features: Reheat and the Application of Steam Generators to the Reheat Cycle; Temperature Controls Apply to Dowtherm Vaporizers; Ammonia Synthesis by the Casale Process; Artist's View of 4000 bbl. per day Catalytic Polymerization Unit.

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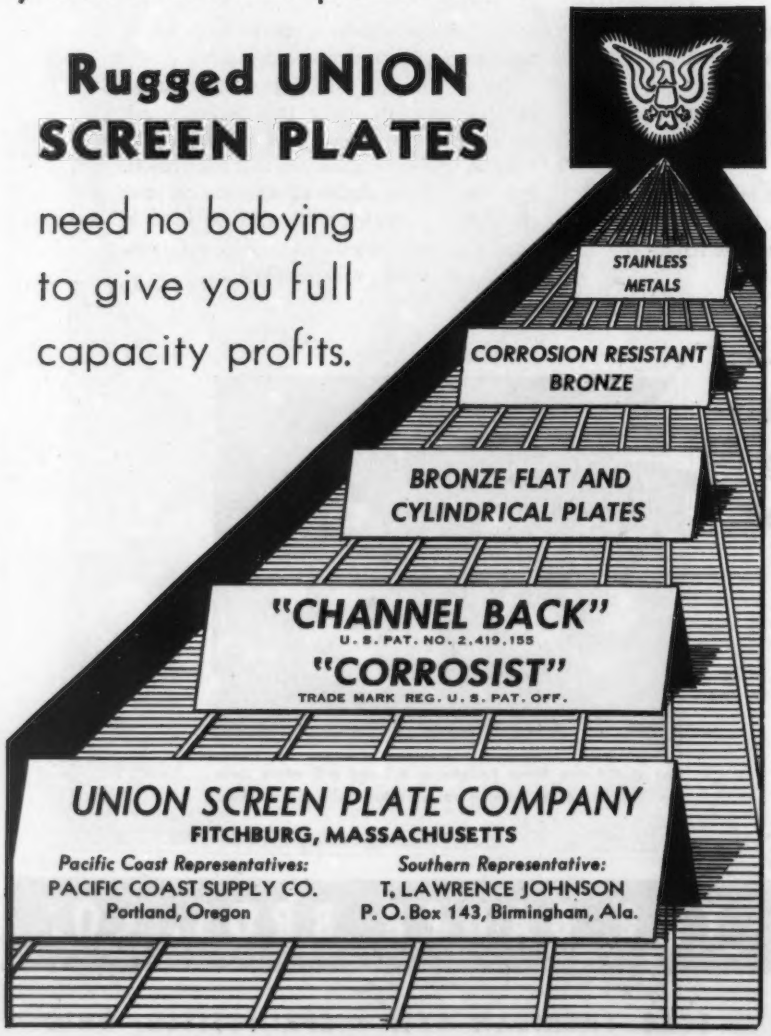


SUPPLIERS

ARNO W. NICKERSON announces that his offices have been moved to his laboratory at 34 Cushman Rd., White Plains, N. Y.

HEPPENSTALL CO., Pittsburgh, Pa., has appointed Stanley J. Leen Co., 54 Wilson St., Brewer, Maine, sales representative to the pulp and paper industry in Maine, New Hampshire, and Vermont.

BAGLEY & SEWALL CO. have announced the resignations of Joseph S. Scheuermann, as vice-president and Thomas N. Carter, director of Engineering, Winder Division, effective April 15, 1952. Mr. Scheuermann was in charge of the entire Winder Project and was located in New York City, while Mr. Carter was stationed in Watertown, New York. As yet, they have not made any plans for the future.

MONSANTO CHEMICAL CO.'s Phosphates Division has appointed Winthrop R. Corey of St. Louis as manager of phosphates and detergents sales.

At the same time, James E. Crawford, Jr., also of St. Louis, was named assistant manager of phosphates and detergents sales. The appointments are effective immediately.

J. B. Hoxie

OLIVER UNITED FILTERS INC., has appointed James B. Hoxie as Western Division sales manager, with headquarters in Oakland. His territory takes in all the Mountain and West Coast States.

Mr. Hoxie, who has been with the company for 20 years, assumed his new duties on February 1st, succeeding Philip J. McGuire who has been appointed director of Research and Development.

SOCONY-VACUUM OIL CO. INC., has transferred W. S. Kumblad to the company's New York office, 26 Broadway, as headquarters staff engineer for Socony-Vacuum Process Products used by the textile and paper industries. Mr. Kumblad formerly served in the Boston office as Process Products representative for New England. In his new duties he replaces W. A. Beman who is now in charge of the company's chemical products section.

LINK-BELT CO. has appointed William R. McNally representative for the pulp and paper industry, to succeed H. F. R. ("Bob") Weber, who has resigned and is now living in Florida. Mr. McNally's headquarters are at the company's Pershing Road plant, 300 W. Pershing Road, Chicago.

INSUL-MASTIC CORP. OF AMERICA has named Henry P. Berry Southern Regional Manager. Mr. Berry will make his headquarters in New Orleans.

CORN PRODUCTS SALES CO. has elected Harold Francis a vice-president and has also appointed him general sales manager for the Eastern Division.

DU PONT'S ORGANIC CHEMICALS DEPARTMENT has named C. Harrell Asbury assistant manager, domestic sales; Heinz A. Lips, manager, lakes, paper, and leather section; and Kenneth C. Johnson, manager, textiles section.

A. E. STALEY MAUFACTURING CO., corn and soybean processor, has promoted Ray E. Harroun, West Coast sales manager to the position of assistant manager of the company's Industrial Sales department at Decatur, Ill.

BAUER BROS. CO., Springfield, Ohio, recently appointed Antone Horstman manager of laboratory operations. He is in charge of both the pulp laboratory and the feed and milling laboratory.

ROHM & HAAS CO. has opened new office and warehouse facilities in Charlotte, N. C.

The new warehouse provides cold storage space, conditioning area, and normal atmosphere storage for the line of Rohm & Haas resins, adhesives, detergents and plasticizers.

REICHHOLD CHEMICALS, INC. have arranged for the manufacture in Israel of a complete line of synthetic resins for the paint, paper, printing ink and plywood industries.

Acquisition of manufacturing facilities for Reichhold products in Israel brings to 19 the number of foreign manufacturing affiliates of that company. Reichhold also has nine plants in the United States and does an annual business of $100 million.

Financial and operational control of the new affiliate will remain in Israel, but Reichhold engineers from the United States will go to Israel to impart the necessary American know-how to engineers there.

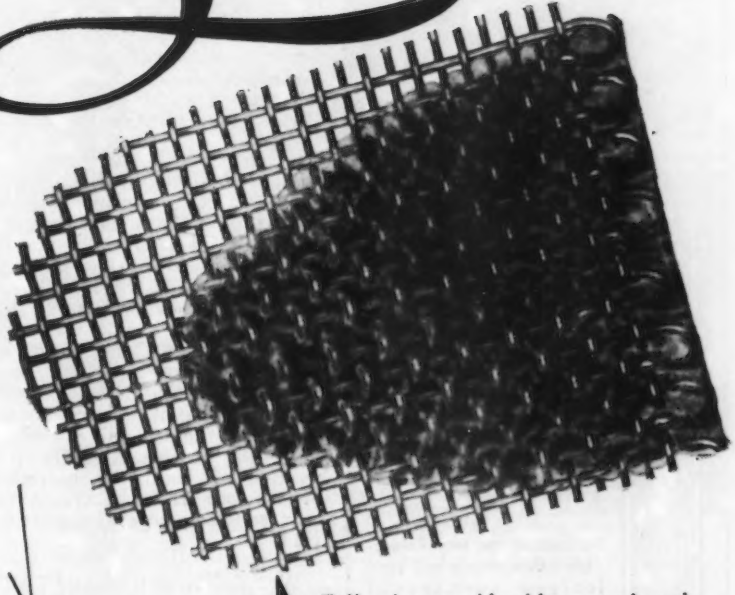
COMBUSTION ENGINEERING-SUPERHEATER, INC., New York, has elected William J. Vogel and Robert M. Hatfield as vice-presidents.

Mr. Vogel was employed by the company in 1924 and has been an executive of the Engineering Department for some years past. He was appointed assistant chief engineer in 1940 and chief engineer in 1950. He will continue in the latter post, working in association with W. H. Armacost, vice-president in charge of engineering.

Mr. Hatfield joined the company in 1934. He was appointed general manager of its Western Division in 1949 and will continue in this post with headquarters in Los Angeles. During World War II, he was on loan to the Federal Government, serving in various capacities in the War Production Board, his final post being that of Deputy Vice Chairman for Production in charge of production for all war industries. In October 1950 his services were again requested by the Government to organize and head the Power Equipment Division of N.P.A. He resigned from this position in

A NEW DEVELOPMENT BY

Lindsay



Following considerable research and testing, we now make available to the paper industry a Fourdrinier wire with a plastic seam edge reinforcement (*patent applied for*). The plastic impregnation replaces the standard sewn steel edge and will be incorporated on future wires. This step forward is evidence of our pledge to "*never cease trying*". The Lindsay Wire Weaving Company, Cleveland 10, Ohio

Lindsay WIRES

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PAPER

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March 1951, but was again recalled to Washington in July to accept appointment as Vice Chairman of the Munitions Board, which post he recently relinquished.

CARBORUNDUM CO., Niagara Falls, N. Y., has elected Clinton F. Robinson president to succeed H. K. Clark who has resigned. Paul B. Brown, Clarence E. Hawke and William H. Wendel, formerly manager of the Bonded Products and Grain Division, Refractories Division and Coated Products Division, respectively, were elected vice-presidents in charge of these divisions.

Mr. Clark's resignation was reported in conformity with his desire and intention to do so once Carborundum's reorganization, modernization and rehabilitation program was effectively under way.

NAUGATUCK CHEMICAL DIVISION, United States Rubber Co. has completed a new plant on Telegraph Road, Los Angeles, Calif., which will be the division's western sales headquarters. The plant will also contain customer technical service laboratories, facilities for the compounding and storage of natural and synthetic rubber latex, and facilities for warehousing resins, plasticizers, rubber chemicals, agricultural chemicals and other products in the Naugatuck Chemical Line. Naugatuck Chemical first set up a plant on the West Coast in 1946.

MONSANTO CHEMICAL CO., Seattle, Wash., is consructing a new plant to convert sulphite liquor from Puget Sound pulp mills into lignin vanillin. It will be put in operation about April 1. The raw material will then be shipped to St. Louis, Mo., for processing into vanilla. The plant is expected to cost about $1 million.

BIRD & SON, INC., has promoted Paul W. Johnson to assistant superintendent of the felt mill at Phillipsdale (East Providence), R. I. He takes the position left vacant by the retirement of Rexford H. Salisbury, who had been assistant superintendent since 1914.

WESTERN PRECIPITATION CORP. has opened a new office at 1429 Peachtree Street, N.W., Atlanta, Ga. The office will be under the direction of Kenneth H. Cree, a graduate mechanical engineer. From this office, Mr. Cree will handle not only Cottrell Electrical Precipitator sales, but also sales of the other equally well-known Western Precipitation products—Multiclone Mechanical Collectors and the recently-perfected CMP (Combined Multiclone-Precipitator) equipment that combines, in one installation, the best features of both mechanical and electrical recovery methods. The area to be served from the Atlanta office includes Georgia, Tennessee, Mississippi, Alabama, Florida and eastern Louisiana.

DU PONT CO. has appointed Dr. Jack B. Callaway manager of west coast sales for the Pigments Department. His headquarters are in Los Angeles, Calif. He succeeds Robert R. Enslin, who died last year.

M. James McLain, formerly a pigments salesman at Cleveland for the central area, succeeds Dr. Callaway as sales promotion manager for dry colors in Wilmington headquarters of the company. Leland F. Andrews succeeds M. McLain, with headquarters in Cincinnati.

BLACK-CLAWSON CO. has appointed Frits Madsen as sales manager of B-C International Ltd., British subsidiary of Black-Clawson in London, England. Mr. Madsen, formerly General Superintendent of the Ny Maglemalle Mill of DeForenede Papirfabrikker in Denmark, enjoys wide experience in the European paper industry, covering both the theoretical and the practical aspects of papermaking.

PEOPLE

DR. LOUIS C. BARAIL, who was chief biologist-bacteriologist of the U. S. Testing Co. for the past eleven years, is now a private consultant to industry in biochemistry and toxicology. Dr. Barail has his offices at 222 W. 83rd street in New York City.

DR. GEOFFREY BROUGHTON, will become Chairman of Chemical Engineering Department, University of Rochester, beginning next September. Currently Dr. Broughton is Chairman of the Paper Engineering Department at Lowell Textile Institute.

EDWARD R. SMITH has been named sales manager of the Milwaukee, Wis. Division of National Container Corp. Before coming to Milwaukee Mr. Smith served as Sales-Service Manager for National Container's Chicago Division.

C. W. LOOMIS, vice-president and director of personnel, was elected to the board and F. V. DEADERICK, Eastern director of sales, was named a vice-president of Bemis Bro. Bag Co. Mr. Loomis, who has been with the company for 36 years, started as a clerk in the Bemis office at Boston. Mr. Deaderick joined Bemis in 1918 at St. Louis.

C. A. MICHAELS has been promoted to vice-president in charge of production and operations of Great Lakes Paper Co. and CLARE MAPLEDORAM has been named public and industrial relations manager.

Mr. Michaels was general superintendent of the Fort William mill and Mr. Mapledoram has been personnel manager at Fort William.

DONALD E. LAWSON was appointed resident engineer of Rayonier Inc., Port Angeles, Wash. division. He replaced BRYAN L. RAUSCHERT who has been named assistant resident manager of the company's Grays Harbor Division at Grays Harbor, Wash. FRED STOLZ has been appointed to fill the position of assistant resident engineer.

EDWARD R. BRYAN has been elected treasurer of Walker-Goulard-Plehn Co.

Mr. Byran has been with W.G.P. for the past twenty-two years. FRANKLIN H. McLEAN was elected assistant treasurer of the company.

A. J. PHILIP, who for the past eighteen years has been mill manager at Windsor Mills, Que., for the Canada Paper Co., has been promoted to the post of assistant general manager of the company. EARL RICE, who for six years has been assistant mill manager at Windsor Mills, replaces Mr. Philip as mill manager.

MICHAEL B. GORMELY, Black-Clawson Service Engineer, is now in Italy to assist the Cartiera Italiana firm in the start-up of their new Black-Clawson cigarette tissue machine which was recently erected under the supervision of B-C Engineer, Charles Miller. This new fourdrinier machine installed at the Italiana mill in the footnills of the Italian Alps, will supplement the production of ten other such machines in that mill operating on cigarette and other fine tissue grades.

KARL A. SWENNING has been promoted to the position of general woods manager of Hollingsworth & Whitney Co. L. G. GLAZIER was elected executive vice-president of the company; W. ELLIOTT PRATT, Jr., was elected vice-president and treasurer; FREDERICK GOODRIDGE was elected vice-president; JACK B. COWIE was elected vice-president in charge of sales; and CHARLES J. DYNES was elected assistant vice-president. The resignation of Robert Nivison as vice-president was accepted with the understanding that he will continue to act as a consultant to the company with his headquarters in Maine.

ROBERT C. ST. CLAIR, formerly assistant chief forester for the British Columbia Forest Service, has joined the Alaska Pine and Cellulose Ltd. as timber consultant, at Vancouver, B. C.

JOHN A. SUMMERLIN of Springfield has been appointed assistant sales manager of Westfield River Paper Co., Inc., Russell, Mass. and its subsidiary, The Glassine Paper Co. of West Conshohocken, Pa. Mr. Summerlin became associated with Westfield River Paper Co., in a sales capacity, following service with the Army Air Force.

RALPH H. MORRILL has been elected president and general manager of the Crocker-McElwain Co. and the Chemical Paper Manufacturing Co. As president, he succeeds JOSEPH E. HOLMES, who, up to the time of the recent death, was president and treasurer. The post of general manager was newly created by the directors. Elected to the post of treasurer was RICHARD S. BENNER who also will serve both companies.

E. L. HOWARD, formerly assistant manager, has been named manager of Northern Pulpwood Ltd. H. P. ELLIS, formerly chief logging engineer with Northern Pulpwood, has been named assistant manager in charge of planning and engineering. Woods operations of the Northern Pulpwood in the Queen Charlotte Islands, on Vancouver Island and on the mainland of British Columbia will all come under the supervision of the two new officials.

GUIN C. OLSON, President of Nackie Paper Co., Milwaukee, was re-elected president of the Fine Paper Assn. of Wisconsin at the annual meeting of the group held February 13 at the Milwaukee Athletic Club. All other officers were also re-elected.

G. W. E. NICHOLSON vice-president in charge of manufacturing has been elected a director of the Union Bag & Paper Corp.

Ferguson is equipped to provide complete service on new or expansion and modernization of existing paper or pulp mill facilities. Preliminary studies, layouts, detail design and engineering . . . machine installation and construction.

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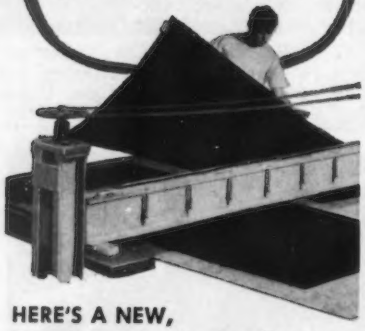

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Especially designed to protect against extremely corrosive conditions, Amer-Plate is particularly adaptable for use in highly corrosive sewers, chemical storage tanks, tank cars and tank trucks hauling unusually corrosive solutions.

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Amer-Plate is a flexible thermoplastic sheet, practical for application to flat, curved, and angular surfaces. Its economy and effectiveness has been proved in the field in over 10 years of development and testing.

This remarkable sheet lining is available in two convenient types: Plain AMER-PLATE for existing steel or concrete tanks or structures and T-Lock AMER-PLATE for newly cast concrete pipe and structures.

So...wherever you require long lasting protection against extreme corrosion, make a full investigation of the possibility of using Amer-Plate. Write for complete information.

Amer-Plate industrial sheet lining is the result of many years experience in the manufacture and application of Amercoat protective coatings.

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Abstracts of Papers Presented at Annual Meeting of TAPPI

Continued from March 7, 1952 issue of Paper Trade Journal

SOME OBSERVATIONS ON THE KINETIC COEFFICIENT OF FRICTION OF PAPER

Geoffrey Broughton and Joan L. Gregg

Little systematic work on the kinetic coefficient of friction of paper appears to have been done. In the present work, the friction meter developed by E. C. Dreby has been adapted to paper.

The coefficient of friction was found to increase with increasing relative humidity, beating, rosin content, and filler content. It decreased on medium calendering, with addition of fatty acids and paraffin. Different furnishes showed friction coefficients varying considerably, the cross-direction also showed a higher coefficient than did the machine-direction.

Gloss and surface roughness measurements were also made upon some of the paper studied.

SEMICHEMICAL PULPS: STRENGTH-SHEET DENSITY STUDIES

Daniel O. Adams and James L. Tennant, Jr.

Four soda and four kraft semichemical pulps were prepared from New England hardwoods in a laboratory Asplund-type defibrator. Yields were from 63 to 848 percent on an oven-dry basis. These plups were evaluated for use in flooring and roofing felts by laboratory beater studies. Hand sheets were made at a base weight of 40 pounds per 480 square feet, a common saturating felt weight.

When tear, tensile and burst of these sheets are plotted against freeness, increasing strength with increased delignification is apparent. However, when the same strength properties are plotted against sheet density, the situation is more complex. The strengths of the unbeaten pulps are uniformly low, and their densities increase with decreasing yield. With beating, both sheet density and sheet strength increase. The slope of the strength versus density curve is generally greater as the yield is decreased. Thus the strength versus density curves at the various yields, cross each other. There is a definite density range within which 5% NaOH gives maximum strength. In another range, 2.5% NaOH gives maximum strength, etc.

At any given sheet density there appears to be a particular quantity of chemical which gives maximum strength sheets. More or less chemical used in cooking results in weaker pulps at the given sheet density.

ROUTINE DETERMINATION OF LIGNIN IN SEMICHEMICAL PULPS BY A MODIFIED TINGLE PROCEDURE

B. L. Browning, L. O. Bublitz, Paul E. Trout, P. A. Franckowiak, and J. L. Ham

Direct methods of lignin determination are too time-consuming to be practical for mill control use. For this reason, most routine "hardness" or bleachability tests employ indirect methods. The most widely used of these, the permanganate number, was shown to be inapplicable to semichemical pulps. Inability of the permanganate ion to penetrate the fiber bundles and shives in the pulp resulted in permanganate numbers that did not correlate with the lignin content of the pulp. It was found that treatment of the pulp sample with a 9:1 mixture of hydrochloric and sulphuric acids (as employed in the Tingle bromine absorption method) swelled and partially dissolved the cellulose, thus rendering the lignin more accessible. Subsequent determination of the lignin by hypochlorite oxidation afforded a bleachability test which rivaled the permanganate method in speed and simplicity. Good linear correlation between TAPPI lignin content and chlorine consumed was obtained for neutral sulphite semichemical aspen pulps which had lignin contents ranging from 12 to 17%.

SEMICHEMICAL PULPING—A PROCESS STUDY

C. W. Converse

The semichemical pulping processes have expanded at a rapid rate during the past six years. Compelling economic forces have brought about this expansion. Another fact now becoming important is the development of bleached semichemical pulp. Semichemical pulp has characteristics which make it very attractive to use in many grades of paper and board and it is today used in grades from 9-point corrugating board to bond paper. Present day pulp has some limitations but these are being eliminated by various methods for modification of the pulp characteristics. Fully bleached pulp in a

yield of 60% and higher is a commercial accomplishment. The burst, tear, tensile, and tear strengths of bleached semichemical pulp are higher than those of bleached soft wood sulphite.

Three commercial semichemical processes are described: neutral sulphite, sulphate, and cold caustic. Of these only the neutral sulphite process is used to produce bleached pulps. Both rotary and vertical digesters are used and also continuous digesters. Movement of the cooked chips to the refiner may be by chemical methods or by pumping. Refining, the reduction of chips to pulp, is the heart of the process and is always accomplished in disk refiners. The advantages of one versus two-stage refining are discussed. The pulp may be washed and screened after which it goes to the paper or board mill.

Based on this information, an effort is made to select the ideal process design for each type of digester and to select the ideal digester for the particular requirements.

The neutral sulphite process is quite corrosive and stainless steel should be used in contact with unwashed stock, especially when hot. Tramp metal protection for the refiners is highly important.

This paper is intended to stimulate the application of modern process designs to semichemical pulp mills.

IMPROVED DIFFUSER WASHING—MARKILA-BRAX STRAINERS AND ANGLE IRON SUPPORTS

K. F. Gothner and H. T. Robson

In an effort to increase the washing capacity of the forty diffusers at the Union Bag and Paper Corp., Savannah, Ga., two modifications of conventional diffuser design were installed on an experimental basis. The first of these was an invention of Finnish origin known as Markila-Brax strainers. These consist of vertical, leaf-shaped strainers extending from the walls of the diffuser towards the center, mounted with screens on both sides. This installation was also equipped with a Sandberg valve to provide automatic dumping. The second modification consisted of crossed angle irons mounted about 5 feet above the diffuser bottom.

The first series of washes was made on 12 by 29-foot diffusers (no. 1 unit) and the second on 13 by 27-foot diffusers (no. 2 unit). The stock was southern pine kraft cooked for 2 hours to a permanganate number of about 27. The diffusers operated under a pressure of about p.s.i. The pulp washed by the conventional diffusers and either of the two modifications was equally clean.

On no. 1 unit the volume of underflow liquor was measured by means of orifice meters and found to be about 11% less from the Markila-Brax diffuser. When the washes on no. 2 unit were made, the underflow liquor was collected in receiving tanks. In this case it was found that the Markila-Brax strainers increased underflow dilution about 6%. There is perhaps no significant change in underflow dilution when a diffuser is modified with either invention.

On no. 1 unit the Markila-Brax strainers reduced the average washing time from 8 hours 35 minutes to 3 hours 35 minutes, a reduction of 58%. On no. 2 however, this remarkable result could not be duplicated. Here the diffusers are 1 foot greater in diameter and wash the same weight of stock, therefore, the pressure on the bottoms is less, thus offering less chance for improvement with the strainers. In this case the Markila-Brax strainers reduced washing time 29%. The same pattern was followed by the washes with the diffusers equipped with angle irons, which permitted a reduction of washing time on no. 1 unit of 18%, and on no. 2 unit, 13%.

It is not practicable to dump a Markila-Brax diffuser through the conventional door because pulp tends to bridge across between the strainers and above them. However, it was found that the Sandberg valve could dump the Markila-Brax diffuser in 22 minutes which was about the average

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dumping time for the regular diffuser and the angle iron diffuser. Assuming 40 more minutes to make up the total cycle time, it was found that the capacity of no. 1 unit could be raised 108% by the Markila-Brax strainers, or 22% by the angle irons. The capacity of no. 2 unit could be increased 33% by the Markila-Brax strainers or 12% by angle irons.

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FUNDAMENTALS OF LITHOGRAPHY FOR PAPER MAKERS

R. F. Reed

Lithography was invented about the year 1800. It employs a printing surface that is neither raised nor depressed. The areas that are to print are made ink receptive, and the non-printing areas are kept ink repellent by a film of water. Lithography was originally done from stones, but is now done almost entirely from thin metal plates on the offset press.

Simple black and white lithography is often called planography or photo-offset. But the principal field of lithography is color printing, the highest form of which is four-color process. Almost all printing plates are now made photographically, usually on sheet zinc or aluminum. Three types are in general use, and are known as surface or albumin plates, deep-etch plates, and bi-metallic plates. Which of these is used depends primarily on whether the runs are short, medium, or long, respectively.

The offset press unit consists of three cylinders: a plate cylinder, a blanket cylinder, and an impression cylinder. In printing, the plate is first dampened with water and then inked, after which the ink image is transferred to the rubber offset blanket that impresses it on the paper. Offset presses are both sheet-fed and roll-fed, the latter running at speeds up to 900 f.p.m. Offset ink must be concentrated in color and resistant to emulsification in water. The ink pigments must be highly insoluble. The inks are generally of the drying-oil type, although heat-set inks are being used increasingly on web presses.

The offset press made possible halftone printing on rough-surfaced papers. Experience has shown, however, that the best color values are obtained on smooth-surfaced papers, and the use of coated offset papers has steadily increased. The versatility of the offset press has made possible a wide variety of printing, and the lower cost of offset plates makes the process particularly adapted to color.

Offset lithography places some special and somewhat more severe requirements on paper than letterpress printing. Because of the uniform squeeze impression, paper must be flat. Wavy or tight-edged paper causes misregister and wrinkling. If roll paper dries out, the edges shrink, and this results in web breaks on the press. Offset paper should be free from lint and dust, as these transfer to the blanket and plate and necessitate frequent press washups. Since a thinner ink film is applied, the pull on the paper surface is greater, and it should have a somewhat higher pick resistance than letterpress paper. Coated offset paper should have a greater degree of moisture resistance to prevent the transfer of coating pigment to the moist offset blanket.

CURL IN PAPER

A. S. Erspamer and W. D. Rice

Much has been said and written about the common defect, paper curl, and a literature review can do much toward clarifying the problem. The authors of this paper present a summation of known facts and observations about curl and related effects, hoping thereby to stimulate a more concerted attack upon the problem.

The characteristics of grain, two-sidedness, and fiber expansion-contraction assume basic roles in causing or affording curl in paper. Types of curl are defined and described as moisture or humidity, inherent, and structural. A review of the papermaking variables influencing curl is presented to complete the coverage of the problem as related to manufacture.

DETERMINATION OF PENTOSANS IN HIGHLY PURIFIED WOOD PULP

Edgar D. Smith, Louis F. Pagel and L. N. Rogers

All methods used for pentosan determinations depend upon the formation of furfural when pentosans are boiled with dilute mineral acids, and a variety of methods have been proposed in the literature for analyzing the furfural so produced. None of these methods was designed for use on pulps having 1% or less pentosans, however, and the methods are generally too insensitive to afford reasonable precision when applied to such pulps.

In this work, a search was made for more sensitive analysis methods for furfural and its derivatives. The colorimetric method of Adams and Castagne using aniline acetate was found to be satisfactorily sensitive and to be specific for furfural in the pentosan distillates, but it was not considered suitable for routine work. Two new methods were developed, one a polarographic method and the other an ultraviolet absorption technique, both of which measured total aldehyde and were satisfactory from the standpoint of sensitivity. The ultraviolet method, however, involved only a single light absorption measurement of a diluted aliquot of the acid distillates and was therefore the easiest to use in addition to being the most sensitive and precise of all the methods tested.

The results of the new ultraviolet absorption analysis for furfural plus hydroxymethyl furfural were compared with those obtained on the same pentosan distillates by the TAPPI bromate titration procedure. It was shown statistically that the two methods measured equal quantities of material and that the results of the TAPPI procedure could be calculated from those of the light absorption analysis *within* the limits of error of the TAPPI analysis method. The standard deviation of the TAPPI method in the range 1 to 3% pentosans was found to be

±0.26% pentosans, while that of the ultraviolet method in this same range was only ±0.05% pentosans.

It was pointed out that the differences between the results of the ultraviolet method and those of the aniline acetate method, as applied to typical pulp distillates, should provide a much better measure of the hydroxymethyl furfural in these distillates than has been heretofore obtainable.

THE COLORIMETRIC DETERMINATION OF PENTOSANS IN HIGHLY REFINED PULP

A. S. O'Brien and T. L. Davis

The pentosan content of highly refined pulps can be analyzed with high precision using the aniline acetic acid colorimetric method. The pentosans of the pulp are converted to furfural by a distillation with acid in the ordinary manner. The colorimetric procedure is specific for furfural. Methyl or hydroxymethylfurfural do not interfere in the method. The color development is highly empirical, but if several variables are carefully controlled reproducible values can be obtained. The color is sufficiently stable for successful application in the laboratory.

The distillation step of the procedure is the same, in general, as that employed in the volumetric or gravimetric methods. The importance of several distillation variables was investigated using highly refined pulps. The size of pulp sample used was a slightly significant variable.

The rate of distillation is of minor importance, but should not vary between extreme limits. The hydrochloric acid in the distilling flask quickly approaches the constant boiling composition 20.3% as the distillation proceeds, in spite of the fact that 12% acid is being constantly added. The concentration of the acid and the temperature of the pulp slurry are nearly the same during most of the distillation regardless of the strength of the acid being added in the range 12 to 20%. Based on the pentosan results the strength of the acid used in the distillation proved to be of slight significance in the range 12 to 20%.

The total volume of distillate collected is a highly significant variable. Furfural continues to be formed from highly refined pulps after the first 360 ml. has been removed. In fact furfural is still being formed in measurable amounts in the seventh 360-ml. portion of distillate. The amount of methyl or hydroxymethylfurfural is small compared with the quantity of furfural, and drops off rapidly as the distillation proceeds through successive 360-ml. portions.

The colorimetric method was applied to several highly refined wood pulps and cotton linters. The precision of the method is good. A pentosan value of 0.12% was obtained for a treated cotton linters sample. Several materials falling in the range 0.10 to 0.60% pentosan were consistently differentiated.

ASSOCIATIONS

Officers of N. Y.-Can. Supts.

C. E. Reynolds, Armstrong Cork Co., Fulton, N. Y., has been elected chairman of the New York - Canadian Division of The American Pulp and Paper Mill Superintendents Assn, for the unexpired term (1951 - 1952) of Chauncey E. Cole, resigned.

Since his election as chairman of the Division, Mr. Reynolds has appointed Gus Holm, Derrico-Canastota Co., 340 E. 110th Street, New York, N. Y., as secretary of the Division to succeed R. S. Green of H. Waterbury & Sons Co., Oriskany, N. Y., and has continued the appointment made by Mr. Cole of Frank McBrearity of the Manhattan Rubber Division of Raybestos-Manhattan, Inc., as the Industrial Affiliate representative of the Division.

Paper Club of New York Meets March 26

The annual banquet of The Paper Club of New York will be held in the Grand Ball Room of The Waldorf-Astoria on March 26, during the week of the annual convention of the National Paper Trade Assn.

The committee is again headed by Charles J. Slicken of Hubbs Corp. Other members—are Charles F. Coy, Coy, Disbrow & Co., W. P. Heilman, S. D. Warren Co., F. W. Mosher,

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The program includes an all star entertainment program following the dinner and dancing. Price of the tickets is $22.00.

Michigan Supts. Plans

The Michigan Division of The American Pulp and Paper Mill Superintendents Assn. is to meet with the Kalamazoo Valley Section of TAPPI at 6:30 p.m. on April 17, 1952, at Hotel Harris, Kalamazoo, Mich. This meeting will be a graphics arts and coating meeting. The general chairman of the April 17 meeting is Merle Wilkins, Kalamazoo Paper Co., Kalamazoo, Mich.

The Division is also planning for ladies night on May 3. There will be no meeting of the Division in June. The date for the annual sports and field day in July will be announced later.

Activities of Miami Valley Supts.

The Miami Valley Division of The American Pulp and Paper Mill Superintendents Assn. has announced the features of its next three meetings, the first, on March 21, the next, on April 24, and the third, on June 6.

The March 21 meeting will consist of a trip through the plant of the Cincinnati Chemical Works (Cincinnati, Ohio), a Division of Ciba Co., Inc. The tour will start at 3 p.m. and will be followed by a cocktail hour and dinner. There will be entertainment after the dinner.

The April 24 meeting, a dinner meeting, is to be held at the Manchester Hotel, Middletown, Ohio. Sponsored by Shartle Bros., Middletown Division of The Black-Clawson Co., the meeting is to feature a talk by Jack Buechler, sales engineer, The Black-Clawson Co., on the new Fourdrinier development known as the Hydraflyte Fourdrinier. A model of this new unit will be exhibited.

The June 6 meeting, the last get-together of the season, will be held at Piqua, Ohio. Sponsored by the Orr Felt & Blanket Co., Piqua, the meeting will consist of the annual golf party for the superintendents, special entertainment for the ladies, a dinner meeting, and a business meeting with election of officers for 1952-1953.

OBITUARIES

Edward V. Patrician, Jr., 58, manager of the Ft. Niagara Corrugated Box Division of the Robert Gair Co., North Tonawanda, N.Y., died March 1.

Mr. Patrician worked for the Robert Gair Co. in the Summer during his college years, was a lieutenant in the Army during World War I, which interrupted his schooling, and after graduation rejoined the Gair firm. He was a member of the Fibre Box Assn.

Norman J. Cowie, vice-president of Hurlbut Paper Co., died on February 28th. Mr. Cowie had been with the company for nine years, coming from the Hawthorne Paper Co. at Kalamazoo, Mich., with whom he spent 20 years. At the time of leaving them, he was their purchasing agent.

Bourdon W. Scribner, 67, Chief of Paper Section, U. S. Bureau of Standards, died of a heart attack, March 5.

Henry Sturges Dennison, president of the Dennison Manufacturing Co., Framingham, Mass., died suddenly on February 29 at his home in that town. Since 1917, he had headed the company founded in Brunswick, Maine, by his great-grandfather Andrew, more than a century ago.

William F. Bromley, retired secretary of the Hammermill Paper Co., died at his home in Erie, Pa., February 19. Mr. Bromley joined the Hammermill organization in 1914, as assistant sales manager. Later, he held the positions of assistant treasurer, assistant secretary, vice-president, member of the Hammermill Executive Committee and the Board of Directors. He retired from Hammermill January 1, 1946.

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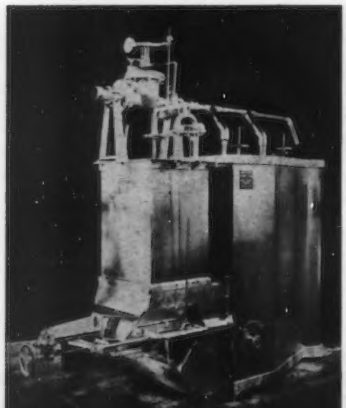

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AMERICAN PAPER AND PULP ASSOCIATION'S PAPER PRODUCTION RATIO REPORT

(Production as per cent of normal capacity)

COMPARATIVE WEEKLY SUMMARIES

	Feb. 2	Feb. 9	Feb. 16	Feb. 23	Mar. 1*
1952	98.1	99.3	97.5	97.0r	97.1
	Feb. 3	Feb. 10	Feb. 17	Feb. 24	Mar. 3
1951	100.2	98.4	102.1	102.4	102.4

COMPARATIVE MONTHLY SUMMARIES

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1951*	99.3	101.3	101.9	102.8	102.2	100.1	88.6	97.7	94.3	100.3	(98.2)	(89.3)	(98.6)
1952*	(97.6)	(97.9)											

COMPARATIVE YEARLY SUMMARIES

	1945	1946	1947	1948	1949	1950*	1951*	1952*
Year to Date	87.7	96.9	104.7	100.7	93.6	94.3	100.5	97.7
Year Average	89.4	101.1	104.3	96.2	88.6	95.8	(98.6)	

( ) Preliminary.
r Revised.
* Weekly capacity base increased by 192 tons to 217,647 tons.

PAPERBOARD OPERATING RATIOS †

	Feb. 2	Feb. 9	Feb. 16	Feb. 23	Mar. 1
1952	85	85	87	87	83
	Feb. 3	Feb. 10	Feb. 17	Feb. 24	Mar. 3
1951	103	104	105	105	105

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1951	102	105	104	105	104	103	84	94	86	87	82	75	94
1952	81	86											

All of the above data is based on tonnage reported to American Paper and Pulp Association. Does not include mills reporting to National Paperboard Association, except in isolated cases where both paper and paperboard are produced and separate tonnage figures are not readily available. Does not include mills producing newsprint exclusively.

† Per cents of operation based on "inch-hours" reported on a 6-day basis to the National Paperboard Association.

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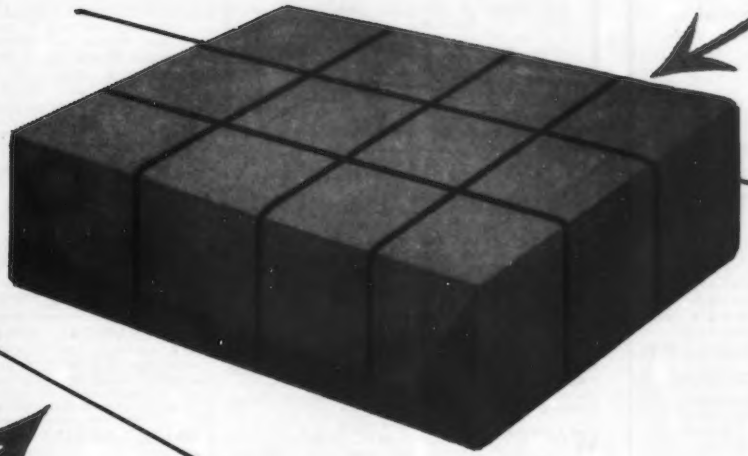

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Master mechanics and assistant master mechanics, structural engineers and plant engineers; chemists, chemical engineers and laboratory men; foremen finishing familiar with cutters, rewinders and converting equipment, must be cost minded and a good leader; salesman who has previously sold wet machine fibre board; junior industrial engineer; machine tenders and back tenders.

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Fully experienced on folding boxboards. Good opportunity, steady job with plenty overtime in one machine mill. Only applications outlining full qualifications and experience will be considered.

Miami Paper Board Mills, Inc., Box 197, Int'l Airport, Miami, Fla. M-21

WORKING SUPERINTENDENT for small fast growing Eastern mill making lightweight specialties. Cylinder machine experience essential. State qualifications and salary expected. Address Box 52-76 care Paper Trade Journal. TF

WANTED—MASTER MECHANIC—practical engineer to supervise plant maintenance. Pulp or paper mill background essential. Fine opportunity and desirable salary. Mill located in Massachusetts. All replies confidential. Address Box 53-73 care Paper Trade Journal. TF

POWER PLANT ENGINEER wanted to take complete charge of Power Department. Give complete information in first letter. Address Box 52-78 care Paper Trade Journal. M-14

FINE PAPER MANUFACTURER with national distribution wishes to expand their sales force. State experience, references and compensation wanted. Address Box 52-89 care Paper Trade Journal. M-14

PLANT ENGINEER—Opportunity for qualified graduate Engineer with extensive experience in general plant engineering and operations in the Pulp and Paper Industry and particularly the kraft process. Address Box 52-2 care Paper Trade Journal. TF

HELP WANTED

SALES ENGINEER—Midwestern manufacturer of pulp and paper mill specialty machinery wants personable young man with mill experience to work in sales department. Approximately two-thirds of time will be spent at home office handling correspondence with customers. One-third of time will be spent in traveling. Give full details of personal, education and experience background. Address Box 52-91 care Paper Trade Journal. M-21

WANTED MILL REPRESENTATIVE for small New England Mill manufacturing Lightweight Specialties, Manifold, rag sulphite and carbonizing. Replies held confidential. Address Box 52-98 care Paper Trade Journal. M-21

GENERAL PAPER MILL SUPERINTENDENT, familiar with high speed Semi-Chemical Fourdrinier Board Machine, for mill located in New England. Also Assistant Superintendent. New plant having just been put in operation. Address Box 52-115 care Paper Trade Journal. M-21

WANTED—Man with experience on laminating machine to work out new products and get sales for such equipment, preferably on thicknesses from 15 to 125 point inclusive. Address Box 52-114 care Paper Trade Journal. M-14

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Paper Mill Supt. 30 years experience and I.C.S. Courses wishes to make change with company wishing to operate at highest possible degree of efficiency on fourdrinier grades Book, Bond Writing, ground wood specialties, News and kraft. Will go anywhere at once. Write Box 52-87 care of Paper Trade Journal. M-14

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FOURDRINIER EXECUTIVE—News—Fine Papers. Have excellent news outlet. Can make operation very profitable. Middle aged. Comands good salary and earns it. Address Box 52-107 care Paper Trade Journal. M-28

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1—Black Clawson 90" 7 roll with 3 spare rolls.
1—Pusey & Jones 84" 4 roll, with doctors and drives.
1—Holyoke 3 roll 45". Rolls bored for steam.

"CYCLAFINER"
1—Shartle "Cyclafiner" with coupling.

CYLINDER MOLDS
1—134" face x 36" diameter, with stainless steel shafts.

DAMPENER
1—Valley Micromist Unit for water finish on paper—120" deckle.

DRYERS
2—124" face x 48" diameter.
1—77" face x 48" diameter—with gear.
1—102" face x 48" diameter, with bearings.
3—110" face x 42" diameter with bearings and gears.
1—108" face x 42" diameter Creping Dryer.
4—42" face x 36" diameter, with frames, gears and bearings.
19—48" face x 48" diameter, with gears, bearings and steam joints.
19—127" face x 42" diameter.
3—118" face x 48" diameter.
2—103" face x 48" diameter.
2—116" face x 36" diameter, with gears and bearings.
1—110" face x 48" diameter.
9—New Moore & White 65" face x 36" diameter —with frames, gears and bearings.

EXTRACTOR ROLLS
1—Downingtown Extractor Roll 128" face x 24" diameter. Anti friction bearings.

FILTERS
1—Oliver Vacuum Filter. Cylinder 8' face x 5' 6" diameter. Iron end vat.

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3—8 plate Sandy Hill Roller Shoe with scrapers.
1—Sandy Hill 12 plate roller shoe.
3—Bagley & Sewall 8 plate, with scrapers and plates.
1—6 plate tailing screens with scrapers.
1—4 plate tailing screen with scraper.

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1—Pusey & Jones 156" x 80' wire—Ball bearing Complete from Voith Inlet to 22" diameter suction couch.

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1—Shartle-Dilts 16' batch with hydraulic dump valve—cast iron tub.

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1—Thorpe 200 ton. Steam platens, 40"x40" with pump.

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1—Smith & Winchester Standard with granite fillings.

KNIFE GRINDER
1—100" Hanchett Knife Grinder with motor.

LABORATORY EQUIPMENT
1—Nobe and Wood anti friction Jordan 13" plug —¼" stainless steel fillings—direct connected to 10 h.p. 220/440/3 phase 60 cycle, 530 r.p.m. motor.

LAMINATOR
1—Black Clawson Duplex 65" Laminator with 5 presses—6 dryers 36" diameter, Unwind stands.

MOTORS
2—General Electric 2500 h.p. slip ring motors. 6600 volts—3 phase—60-cycle—257 r.p.m., with complete controls.
2—Westinghouse 200 h.p. 2200 volts—3 ph.—60 cycle—600 r.p.m. Synchronous speed with controls and grids.
1—Westinghouse 150 h.p. 2200 volts—3 ph.—60 cycle—580 r.p.m. with controls and grids.
1—General Electric—75 h.p.—2200 volts—3 ph.—60 cycle—430 r.p.m.
1—Allis Chalmers 30 h.p. 440 v. 660 r.p.m.
1—General Electric—25 h.p.—230 volts—3 ph.—60 cycle—300/900 r.p.m.
25 other 440 v. motors from 2 h.p. to 15 h.p.

PULP BALING PRESS
2—500 Ton Pulp Baling Presses with pumping unit and motor.

PULP EQUIPMENT
1—Bird ball bearing Pulp Screen. Practically new. Used 6 months.
2—APMEW Ball Bearing Pulp Screens—30 ton capacity—outward flow.
1—D. J. Murray 10' x 25' Barking Drum.

PULPERS
2—#2 Lannoye.

PULPWOOD GRINDER
1—Roberts Grinder for 4' wood, with stone and 2500 h.p. motor, with controls. New 1947. Used 6 months.

PUMPS
1—New Worthington—bronze filled. 10,000 g.p.m., 35' head, with extended base for motor — spare new impeller.
44—Centrifugal Pumps, open & closed impellers. Direct connected or Belt Driven. Extended base for motor. Assorted capacities and heads. Most used less than one year.

REDUCERS
1—Link Belt 40 h.p. Ratio 2.2-1, 500 r.p.m.-227 r.p.m.

REELS
1—2 bowl 106"—18" diameter iron bowls.
1—2 bowl 94"—16" diameter bowls.

REFINER
1—Shartle Hydrafiner with coupling and new spare stainless steel filling.

ROLLS—PRESS, COUCH, etc.
32—Press rolls, brass and rubber covered.
14—Couch rolls, brass and rubber covered.
250—Brass and steel carrying rolls.

ROTARY SCREENS
1—#2 Bird—Copper Vat.
2—#3A Bird—copper vats.

SAVEALLS
1—Dorr ADKA #40 complete, including vacuum pump. Will handle up to 500 g.p.m. of white water.

SCREW PRESSES
1—Valley Voith Screw Press Size 2.
1—Valley Voith Screw Press—enclosed drive.

SHEETERS
1—Hamblet 124" Duplex Sheeter with maxim layboy—8 roll backstand—motor and starter.
1—Moore & White Simplex 114" Sheeter with slitters—counter. Maxim layboy overlapping delivery. 8 roll backstand, motor and starter.
1—64" Duplex Dillon with 15 roll Back Stand.

SHREDDERS
1—American 37" Hamermill, anti-friction bearing.
1—Jeffrey 26½" Knives—7 knife rotor—6 knife bed plate. Ball bearing.

SLITTERS AND WINDERS
1—Beloit 125" Paper Machine Slitter and Rewinder—42" rewind.
1—Hudson Sharp 25W—66" Wax roll slitter and rewinder. New 1947.
2—Cameron 42" Model 6—24" rewind.
1—Cameron 72"—Model 8—40" rewind.
1—Beloit 80" 2 drum, with Lewellyn Drive, shear cut slitters, backstand—34" rewind.
1—Cameron 44" model 9-5.
1—Beloit 90" with rider roll, anti friction bearings. Used 6 months.

SMOOTHING PRESSES
2—New Farrel Birmingham 108" face x 24" diameter. Rubber covered, with ball bearings and enclosed drives.

STEAM TURBINES
1—De Laval 225 h.p. Initial pressure 140 p.s.i. Exhaust pressure 35 p.s.i. Complete with gear reducer.
1—De Laval Variable speed—375 h.p. at 135 gauge and 30 p.s.i. exhaust. Complete with gear reducer.

STOCK PUMPS
1—Shartle 10 x 20 Single Plunger Pump.
2—Beloit 8x10 Triplex.
1—Triplex—8x10. Used less than 1 year.
2—Shartle Agi-flo, 13" suction, 14" and 4" discharge. Anti friction bearings.
1—Beloit 10 x 20 Triplex.
1—Moore & White 10 x 16 Triplex.

SUCTION COUCH ROLLS
2—Millspaugh 36" diameter x 234" drilled face with enclosed drive, water cooled bearings, 12" suction boxes and 1 spare shell.
1—Millspaugh 92" drilled face x 22" diameter, with pinion gear.

SUCTION PRESS ROLLS
1—Sandusky 97" drilled face x 14" diameter.
1—Millspaugh 50" face x 14" diameter.
1—Sandusky 92" drilled face x 22" diameter, with pinion gear.

SUPERCALENDERS
1—Norwood 74" 9 roll with unwind and rewind. Complete with drive and 2 spare rolls.
1—Norwood 64" 10 roll with unwind and rewind. Complete with drive and 2 spare rolls.
1—Norwood 58" 9 roll with unwind and rewind. Complete with drive and 2 spare rolls.

THICKENERS
1—Glens Falls Machine Co.—cylinder 62 x 48—rubber couch 20" diameter.

TOILET TISSUE PERFORATOR
1—Paper Converting Machine Co. Model 141 automatic 31" Perforator, slitter and Winder —with three motors—ball bearing.

VACUUM PUMPS
2—Nash ½ H-5 Vacuum Pumps
2—Nash #3.
1—Nash #2.
1—#4 Nash Hytor.
1—#4 Nash Hytor—all bronze.

WET MACHINES
1—84" with Hoffman Couch. New vat. New wood press roll.

WRAPPING MACHINE
1—Morrow Stevens type IC. Package thickness ¾" to 5". Used 30 days.

YANKEE DRYERS
1—New Sandy Hill 100" face x 72" diameter, with bearings and doctor.
1—Voith 100" face x 1' diameter—with bearings.

WHY LIST YOUR EQUIPMENT? — WE WILL BUY IT.

CLEARING HOUSE

HELP WANTED

SALES ENGINEER
for
Mechanical Equipment

Chemical Engineer, about 30 years old, with enough selling experience to know he wants to sell—and can sell.

Equipment produced by Eastern firm, who is outstanding manufacture in its field for Paper and Textile industries.

With headquarters in Miami Valley of Ohio, and cover Ohio, Indiana, and Illinois.

Write full details and references first letter, including salary requiremens. Our employees know of this advertisement.

Address Box 52-112, care Paper Trade Journal. TF

BACKTENDERS

Leading Midwestern specialty mill has opening for several backtenders. Mill located in small progressive midwestern city with modern living advantages. Splendid opportunity for qualified applicants. Write giving age, experience, including, type and speeds of paper handled and any other pertinent facts. Box number 52-111 care Paper Trade Journal. M-28

Designers, detailers, layout draftsmen for drawing board work with old established manufacturer of medium and heavy machinery. Men with paper mill machinery experience preferred. Permanent openings, excellent salary and working conditions. Resume covering work, technical history, and salary expectency required. Address Box 52-92 care Paper Trade Journal. M-21

WANTED: Superintendent of Finishing in a mill making diversified grades of specialty papers. Require a superintenedent with initiative and supervisory ability. Acquaintance with converting equipment desirable. Fine opportunity for an efficient and capable man. Address Box 52-93 care Paper Trade Journal. M-28

YOUR BOSS with at least 10 years experience manufacturing high grade folding box board. Please reply stating experience and salary to Box 52-102 care Paper Trade Journal. A-4

HELP WANTED

MEN WANTED—POSITIONS OPEN

We can place—general superintendents for two large paper and pulp mills, attractive salary; night supt. Fourdrinier machine mill; production supervisor Fourdrinier machine mill making bag paper and board.

Master mechanics and assistant master mechanics, structural engineers and plant engineers; chemists, chemical engineers and laboratory men; foremen finishing familiar with cutters, rewinders and converting equipment, must be cost minded and a good leader; salesman who has previously sold wet machine fibre board; junior industrial engineer; machine tenders and back tenders.

LIST YOUR CONFIDENTIAL APPLICATION WITH US
to keep informed of attractive positions open in the pulp and paper mills.
CHARLES P. RAYMOND SERVICE, Inc.
294 Washington St., Boston 8, Mass.
SPECIALISTS IN PLACING AND IN SUPPLYING PULP AND PAPER MILL EXECUTIVES M-14

We are looking for an experienced glue department foreman who can train and direct his employees successfully. This opening in our organization is a top position. Extremely attractive earnings and advantages. Your reply will be kept confidential. Our employees know of this ad. Address Box 52-88 care Paper Trade Journal. M-14

BEATER ENGINEER

Fully experienced on folding boxboards. Good opportunity, steady job with plenty overtime in one machine mill. Only applications outlining full qualifications and experience will be considered.
Miami Paper Board Mills, Inc., Box 197, Int'l Airport, Miami, Fla. M-21

WORKING SUPERINTENDENT for small fast growing Eastern mill making lightweight specialties. Cylinder machine experience essential. State qualifications and salary expected. Address Box 52-76 care Paper Trade Journal. TF

WANTED—MASTER MECHANIC—practical engineer to supervise plant maintenance. Pulp or paper mill background essential. Fine opportunity and desirable salary. Mill located in Massachusetts. All replies confidential. Address Box 53-73 care Paper Trade Journal. TF

POWER PLANT ENGINEER wanted to take complete charge of Power Department. Give complete information in first letter. Address Box 52-78 care Paper Trade Journal. M-14

FINE PAPER MANUFACTURER with national distribution wishes to expand their sales force. State experience, references and compensation wanted. Address Box 52-89 care Paper Trade Journal. M-14

PLANT ENGINEER—Opportunity for qualified graduate Engineer with extensive experience in general plant engineering and operations in the Pulp and Paper Industry and particularly the kraft process. Address Box 52-2 care Paper Trade Journal. TF

HELP WANTED

SALES ENGINEER—Midwestern manufacturer of pulp and paper mill specialty machinery wants personable young man with mill experience to work in sales department. Approximately two-thirds of time will be spent at home office handling correspondence with customers. One-third of time will be spent in traveling. Give full details of personal, education and experience background. Address Box 52-91 care Paper Trade Journal. M-21

WANTED MILL REPRESENTATIVE for small New England Mill manufacturing Lightweight Specialties, Manifold, rag sulphite and carbonizing. Replies held confidential. Address Box 52-98 care Paper Trade Journal. M-21

GENERAL PAPER MILL SUPERINTENDENT, familiar with high speed Semi-Chemical Fourdrinier Board Machine, for mill located in New England. Also Assistant Superintendent. New plant having just been put in operation. Address Box 52-115 care Paper Trade Journal. M-21

WANTED—Man with experience on laminating machine to work out new products and get sales for such equipment, preferably on thicknesses from 15 to 125 point inclusive. Address Box 52-114 care Paper Trade Journal. M-14

SITUATIONS WANTED

Paper Mill Supt. 30 years experience and I.C.S. Courses wishes to make change with company wishing to operate at highest possible degree of efficiency on fourdrinier grades Book, Bond Writing, ground wood specialties, News and kraft. Will go anywhere at once. Write Box 52-87 care of Paper Trade Journal. M-14

PRODUCTION MANAGER

Middle aged executive with wide practical experience covering all phases on wide range of papers. Fourdrinier only. Eleven years with one of America's finest mills. Good educational background. Address Box 52-106 care Paper Trade Journal. M-28

MECHANICAL ENGINEER—25 years experience in administration, engineering, manufacturing and converting creped tissues and specialties, desires position in top engineering or management. Presently employed. Address Box 52-69 care Paper Trade Journal. M-28

PLANT ENGINEER—Extensive background, designing, developing and building converting machinery. Redesign plant equipment and machines for maximum production. Tissue, cellulose and specialties. Supervise plant maintenance and production. Address Box 52-113 care Paper Trade Journal. M-14

FOURDRINIER EXECUTIVE—News—Fine Papers. Have excellent news outlet. Can make operation very profitable. Middle aged. Comands good salary and earns it. Address Box 52-107 care Paper Trade Journal. M-28

EXPERIENCED PAPER MAN interested in getting one or two good paper lines to sell in New England Territory on a commission basis. Address Box 52-96 care Paper Trade Journal. M-14

SERVICES of Experienced Chemical Engineer available on reasonable basis for consultation on successful design, construction and operation of deinking and bleaching plants either projected or existing. Address Box 52-86 care Paper Trade Journal. M-28

FOR SALE

41 Dryers—48″ diameter x 143″ face.
15 Dryers—48″ diameter x 132″ face.

Above complete with frames, gears and bearings.

J. J. ROSS COMPANY

250 Frelinghuysen Ave. Tel.—Bigelow 3-3720 Newark 5, N. J. M-14

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PAPER CONVERTERS

G. B. GOLDMAN PAPER COMPANY

Sheeting — Slitting — Rewinding — Flat Cutting
all grades of paper

BUYERS OF JOB LOT PAPER ITEMS — SALVAGE — REJECTS, SIDE RUNS — DAMAGED, ETC.

Third & Wood Streets, Philadelphia 6, Pa. Phone: Lombard 3-6714

M-14

FOR SALE | FOR SALE | FOR SALE

TELEPHONE HUMBOLDT 2-2127

ROSS PAPER MACHINERY CO.

265 PASSAIC STREET
NEWARK 4, N. J.

CONVERTING PAPER MAKING EQUIPMENT

NEW, USED, REBUILT PAPER AND PULP MACHINERY

CABLE ADDRESS - JACROSS

MACHINERY WANTED FOR OUTRIGHT PURCHASE
From a Single Item to A Complete Mill.

BEATERS
1—Dilts 750 lb. Iron Tub. Roll 44" face x 50" diameter.
1—Downingtown 1000 lb. Iron Tub. New roll 48" face x 48" diameter.

CALENDER ROLLS
48 Chilled Iron Rolls—Assorted sizes.

CALENDER STACKS
1—Farrel Birmingham, 5 roll, 108" Calender Stack, with doctors, 2 rolls bored for steam.
1—Black Clawson 90" 7 roll with 3 spare rolls.
1—Pusey & Jones 84" 4 roll, with doctors and drives.
1—Holyoke 3 roll 45". Rolls bored for steam.

"CYCLAFINER"
1—Shartle "Cyclafiner" with coupling.

CYLINDER MOLDS
1—134" face x 36" diameter, with stainless steel shafts.

DAMPENER
1—Valley Micromist Unit for water finish on paper—120" deckle.

DRYERS
2—124" face x 48" diameter.
1—77" face x 48" diameter—with gear.
1—102" face x 48" diameter, with bearings.
5—110" face x 42" diameter with bearings and gears.
1—108" face x 42" diameter Creping Dryer.
4—42" face x 36" diameter, with frames, gears and bearings.
18—40" face x 48" diameter, with gears, bearings and steam joints.
19—127" face x 42" diameter.
3—110" face x 48" diameter.
2—103" face x 48" diameter.
2—116" face x 36" diameter, with gears and bearings.
1—110" face x 48" diameter.
9—New Moore & White 65" face x 36" diameter —with frames, gears and bearings.

EXTRACTOR ROLLS
1—Downingtown Extractor Roll 128" face x 24" diameter. Anti friction bearings.

FILTERS
1—Oliver Vacuum Filter. Cylinder 8' face x 5' 6" diameter. Iron end vat.

FLAT SCREENS
3—8 plate Sandy Hill Roller Shoe with scrapers.
1—Sandy Hill 12 plate roller shoe.
5—Bagley & Sewall 8 plate, with scrapers and plates.
1—8 plate tailing screens with scrapers.
1—4 plate tailing screen with scraper.

FOURDRINIER SECTION
1—Pusey & Jones 156" x 80' wire—Ball bearing Complete from Voith Inlet to 22" diameter suction couch.

"HYDRAPULPER"
1—Shartle-Dilts 16' batch with hydraulic dump valve—cast iron tub.

HYDRAULIC PRESS
1—Thorpe 200 ton. Steam platens. 40"x40" with pump.

JORDANS
1—#6 Miami, for motor drive.
3—Jones Majestics with base and couplings—
2—#3 Appleton with base and coupling.
1—Jones Majestic. Stainless Steel Filling.
3—E. D. Jones Pony. 3/16" stainless steel fillings—banded plugs. Spare new fillings.
1—Smith & Winchester Standard with granite fillings.

KNIFE GRINDER
1—100" Hanchett Knife Grinder with motor.

LABORATORY EQUIPMENT
1—Nobe and Wood anti friction Jordan 13" plug —¼" stainless steel fillings—direct connected to 10 h.p. 220/440/3 phase 60 cycle, 530 r.p.m. motor.

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1—General Electric—25 h.p.—230 volts—3 ph.—60 cycle—300/900 r.p.m.
25 other 440 v. motors from 2 h.p. to 15 h.p.

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2—500 Ton Pulp Baling Presses with pumping unit and motor.

PULP EQUIPMENT
1—Bird ball bearing Pulp Screen. Practically new. Used 6 months.
2—APMEW Ball Bearing Pulp Screens—30 ton capacity—outward flow.
1—D. J. Murray 10' x 25' Barking Drum.

PULPERS
2—#2 Lannoye.

PULPWOOD GRINDER
1—Roberts Grinder for 4' wood, with stone and 2500 h.p. motor, with controls. New 1947. Used 6 months.

PUMPS
1—New Worthington—bronze filled. 10,000 g.p.m., 35' head, with extended base for motor — spare new impeller.
44—Centrifugal Pumps, open & closed impellers. Direct connected or Belt Driven. Extended base for motor. Assorted capacities and heads. Most used less than one year.

REDUCERS
1—Link Belt 40 h.p. Ratio 2.2-1, 500 r.p.m.-227 r.p.m.

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1—2 bowl 106"—18" diameter iron bowls.
1—2 bowl 94"—16" diameter bowls.

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1—Shartle Hydrafiner with coupling and new spare stainless steel filling.

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32—Press rolls, brass and rubber covered.
14—Couch rolls, brass and rubber covered.
250—Brass and steel carrying rolls.

ROTARY SCREENS
1—#2 Bird—Copper Vat.
2—#3A Bird—copper vats.

SAVEALLS
1—Dorr ADKA #40 complete, including vacuum pump. Will handle up to 500 g.p.m. of white water.

SCREW PRESSES
1—Valley Voith Screw Press Size 2.
1—Valley Voith Screw Press—enclosed drive.

SHEETERS
1—Hamblet 124" Duplex Sheeter with maxim layboy—8 roll backstand—motor and starter.
1—Moore & White Simplex 114" Sheeter with slitters—counter. Maxim layboy overlapping delivery. 8 roll backstand, motor and starter.
1—64" Duplex Dillon with 15 roll Back Stand.

SHREDDERS
1—American 37" Hamermill, anti-friction bearings.
1—Jeffray 26½" Knives—7 knife rotor—6 knife bed plate. Ball bearing.

SLITTERS AND WINDERS
1—Beloit 125" Paper Machine Slitter and Rewinder—42" rewind.
1—Hudson Sharp 25W—66" Wax roll slitter and rewinder. New 1947.
2—Cameron 42" Model 6—24" rewind.
1—Cameron 72"—Model 8—40" rewind.
1—Beloit 80" 2 drum, with Lawellyn Drive, shear cut slitters, backstand—34" rewind.
1—Cameron 44" model 8-S.
1—Beloit 90" with rider roll, anti friction bearings. Used 6 months.

SMOOTHING PRESSES
2—New Farrel Birmingham 108" face x 24" diameter. Rubber covered, with ball bearings and enclosed drives.

STEAM TURBINES
1—De Laval 225 h.p. Initial pressure 140 p.s.i. Exhaust pressure 35 p.s.i. Complete with gear reducer.
1—De Laval Variable speed—375 h.p. at 135 gauge and 30 p.s.i. exhaust. Complete with gear reducer.

STOCK PUMPS
1—Shartle 10 x 20 Single Plunger Pump.
2—Beloit 8x10 Triplex.
1—Triplex—8x10. Used less than 1 year.
2—Shartle Agi-flo, 13" suction, 14" and 4" discharge. Anti friction bearings.
1—Beloit 10 x 20 Triplex.
1—Moore & White 10 x 16 Triplex.

SUCTION COUCH ROLLS
2—Millspaugh 36" diameter x 234" drilled face with enclosed drive, water cooled bearings, 12" suction boxes and 1 spare shell.
1—Millspaugh 92" drilled face x 22" diameter, with pinion gear.

SUCTION PRESS ROLLS
1—Sandusky 97" drilled face x 14" diameter.
1—Millspaugh 50" face x 14" diameter.
1—Sandusky 92" drilled face x 22" diameter, with pinion gear.

SUPERCALENDERS
1—Norwood 74" 9 roll with unwind and rewind. Complete with drive and 2 spare rolls.
1—Norwood 64" 10 roll with unwind and rewind. Complete with drive and 2 spare rolls.
1—Norwood 58" 9 roll with unwind and rewind. Complete with drive and 2 spare rolls.

THICKENERS
1—Glens Falls Machine Co.—cylinder 62 x 48—rubber couch 20" diameter.

TOILET TISSUE PERFORATOR
1—Paper Converting Machine Co. Model 141 automatic 81" Perforator, slitter and Winder —with three motors—ball bearing.

VACUUM PUMPS
2—Nash ½ H-5 Vacuum Pumps
2—Nash #3.
1—Nash #2.
1—#4 Nash Hytor.
1—#4 Nash Hytor—all bronze.

WET MACHINES
1—84" with Hoffman Couch. New vat. New wood press roll.

WRAPPING MACHINE
1—Morrow Stevens type IC. Package thickness ¾" to 5". Used 30 days.

YANKEE DRYERS
1—New Sandy Hill 100" face x 72" diameter, with bearings and doctor.
1—Voith 100" face x 1' diameter—with bearings.

WHY LIST YOUR EQUIPMENT? — WE WILL BUY IT.

FOR SALE

CAMERON SLITTERS

1—62" Type 26-3A
1—52" Type 8-5
1—42" and 1—62" Type 6
1—32" and 1—42" Type 40-2A
1—42" and 1—62" Type 40-1-AF
1—62" and 1—72" 10-5
1—72" and 1—82" Type 8-10
1—112" Type 18
1—72" Web Cameron Automatic Tension Unwind Stand with K.V.P. Photo-Electric Eye Control

OTHER SLITTERS

1—62" Beck Duplex Rewind Razor Blade Slitter & Rewinder. Suitable for paper and plastics
1—50" Meisel Shear Cut, Sereis OP-2
1—62" Type AA Langston Shear Cut
1—30" and 1—62" Langston Type A Shear Cut
1—42" Kidder Merchant Model Shear Cut Pneumatic Control
1—40" Hobbs Shear Cut, duplex rewind with AC motor
1—112" Waldron Double Drum S. & R.
1—94" Beloit, heavy duty Paper Machine Winder
1—85" Langston elevating mill roll stands 60" diameter.

POWER PAPER CUTTERS

10—Seybold, 50" Precision, 64" 8Z, 65" 6Z, 44", 63" and 74" 20th Century; 48" and 55" Holyoke; 56" and 74" Dayton
5—Oswegos, 32", 38", 44", 50" and 55".
5—Sheridans, 34", 36", 40", 50" and 55" & 1—32" Perfection Model.
1—Dexter 50".
5—Acme, 32", 34", 36", 46" and 50".
1—Smith & Winchester Undercut 63".

MISCELLANEOUS MACHINES

1—36" Hudson-Sharp A-2 3 color Aniline Printing Press, with 4-A Sheeter. Roll to roll or roll to sheet.
1—24" Schultz Automatic Waxed and Shelf Roll Machine. Rewinds 25' to 250'.
1—6½" and 1—21" four unit Champlain Rotogravure Presses
1—72" Hudson-Sharp 25W Winder for Waxed and Household paper rolls.
1—34" Waldron Gummed Paper Breaker.
1—40" Special roll to roll coater or Lacquer saturator.
1—48" Waldron Roll to Roll Lacquer Coater
1—42" Waldron, 2 Roll, Roller Coater, Puts 2 coats on both sides of web at one time or any combination. Applies any material to paper, cellophane, plastics, etc.
1—Weber SAG Grocery Bag Machine. Range 4¼x10¼ to 7¾x19¼.
1—2 color 36x60" Kidder Roll to Roll Press, with Rotary Punching attachment
1—Sheridan Die Press, Model 8B Platen 33" x 46". Automatic Feeder.
1—52" Waldron Anti-friction Embossing Machine with Slitting attachment.
1—30" Bagprint 3-color Aniline Tailprinter.
1—Kidder 36"x48" 2-color Rotary Wrapping Paper Press.
1—45" Robinson Scorer.
1—40" Hot Waxer for Carton blanks. One or two sides.
2—Potdevin Waxing Machines, 82" wide.
1—Hudson-Sharp 3-deck Napkin Machine. 17" max. width x 16½" cut-off.
1—45" and 1—48" Hamblet Rotary Sheeter.
1—64" Dillon Duplex Rotary Sheet Cutter.
1—94" Moore & White Duplex Rotary Sheet Cutter.
1—116" Model 29 Hamblet Duplex Rotary Sheet Cutter, slitting attachment, Erie automatic layboy and twelve roll backstands.
1—50" and 1—74" Hamblet Single Rotary Sheeters with Layboys, Slitting attachments and Backstands.
2—Asphalt Laminating machines, one 70" and one 88".
1—Bird Pulp Screen. Type A-1-6-3/16. Plates cut .014".
1—APMEW Pulp Screen. Plates cut .085".
1—24" Weiner Refiner.
1—84" Carthage wood chipper, 10 knives, belt drive.
2—36" x 76" Wet Machines.
2—#2 Lasnoye Pulpers.
2—2000 lb. Niagara Iron Tub Beaters.
1—108" Sandy Hill Shear Cut Double Drum Winder, rewinds 40" diameter rolls.
1—61" Ten roll Holyoke Stack of Super Calenders.

We Want YOUR Used Equipment—
Write Us NOW

GIBBS-BROWER CO. INC.
Please address reply to Room 902
21 East 40th Street, New York 16, N.Y.
Telephone Lexington 2-5759

M-14

FOR SALE

FOR SALE

REBUILT ELECTRICAL MACHINERY

AC MOTORS (3 ph. 60 cy.)

HP	Make	Wdg	Spd.	Type
400	G.E.	S.R.	450	MT
300	G.E.	S.R.	450	I M
200	West.	S.R.	600	CW
125	West.	Syn.	277	
100	G.E.	S.R.	450	I M
100	West.	Syn.	900	
100	G.E.	S.C.	1750	IK
100	West.	S.C.	1200	CS
75	West.	S.C.	900	CS
60	West.	S.R.	575	CW
50	West.	S.C.	1750	CS
50	West.	S.C.	900	CS
50	Al. Ch.	S.C.	1200	AR
4-50	G.E.	S.C.	1750	KT
40	G.E.	S.R.	860	MT
25	500 v. West.	S.C.	1750	CB3S5
25	Cr.Wh.	S.C.	865	
25	West.	S.C.	1750	CS
20	Al. Ch. (new)	S.C. (Hi-Torq)	1685	ARWHH
20	West.	S.C.	1750	CS
15(2)	Al.Ch.(New)	S.C.	1200	AR
15	Al.Ch.(New)	S.C.	1800	AR
10	West.	S.C.	570	C8566C
10(5)	Al.Ch.	S.L.	575	ARY
10	West.	S.C.	1200	C8370C
10(2)	Al.Ch.(New)	S.C.	1200	AR
10	Al.Ch.(New)	S.C.	1800	AR
7½	Al.Ch.(New)	S.C.	1200	AR
7½	Al.Ch.(New)	S.C.	1800	AR
7½(3)	Al.Ch.	S.L.	570	ARY
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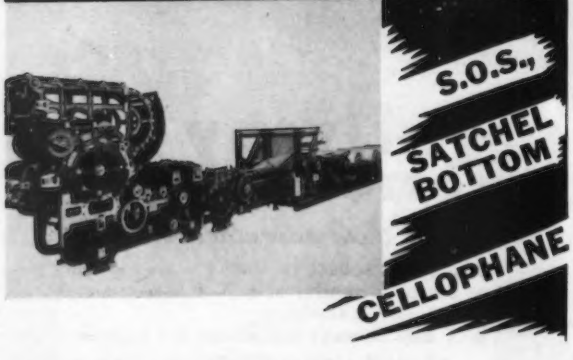

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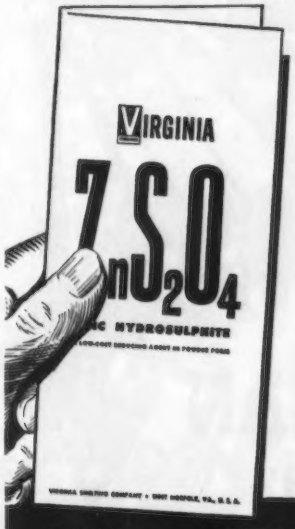

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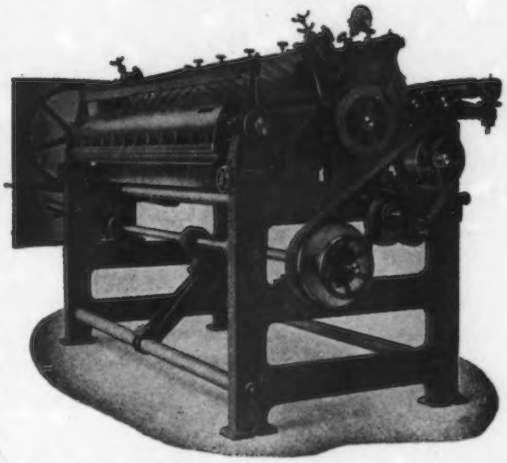

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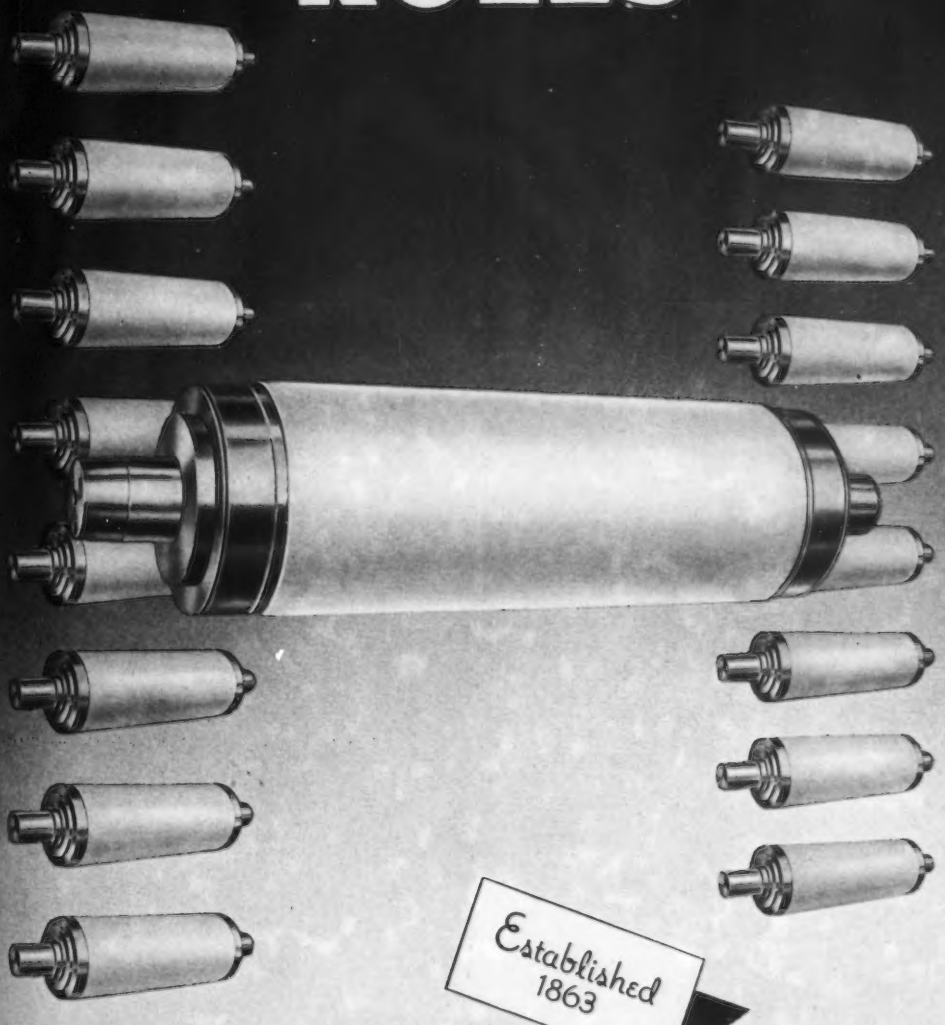

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